

ROUTINE MAINTENANCE:  
FORMING, REFORMING, AND TRANSFORMING SOCIAL FORMATIONS

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## Abstract

This dissertation describes four routine activities—seeing, working, touching, and eating—in order to develop the concept of a social formation. An effort to elucidate the concept of a social formation, and, in particular, to articulate the relationship between politics and social formations, connects each of the chapters. Following the theorists of social formations, I construe as *political* any process that actively forms, reforms, or transforms a given social formation. This thesis does not imply that everything is politics, but, rather, that every process has the potential to become political. The concept of a social formation connects politics with any of the processes—small or large, micro or macro, individual or collective—that structure, reproduce, and alter the world containing them. Politics within social formations is a common, diffuse process rather than a rare moment or event. The present study therefore focuses on continuously repeated activities rather than on occasional, delimited events such as voting, legislating, or the founding of new states.

The first chapter describes how new forms of seeing in the late-seventeenth and mid-nineteenth centuries made it possible to observe, measure, and represent first, “the market system,” and later, “the economy.” The second chapter analyzes the politics of working; building on historical scholarship documenting the influence of thermodynamics on Marx’s thought, it demonstrates that, for Marx, the peculiar ability of human labor-power to create value is the result of politics, and not, as many Marxists assert, of nature. The third chapter explores the notion of a “politics of touching” by analyzing Walt Whitman’s poems that envision a new political order founded on comradeship—a distinct kind of friendship characterized by physical intimacy. The final

chapter discusses the politics of eating and contends that a new discourse of “eco-dietetics” emerged in the mid-twentieth century out of social movements promoting seasonal, local, organic, and “Slow” food. The conclusion considers the surprising role of the nineteenth-century German chemist Justus von Liebig in each of the main chapters.

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## Introduction

Commentators of the early twenty-first century often remark that politics has degenerated into an echo chamber of partisan bickering. Calls to restore civility to politics or to return to a (mythical) pre-partisan era of compromise attest to the growing appeal of this sentiment. There is something of merit in these pronouncements, for partisan politics in the North Atlantic world, increasingly beholden to the demands of neoliberalism, has become *both* a tragedy and a farce. But politics as such continues to thrive beyond the purview of the agents and institutions of the nation-state, of bureaucrats, of party officials, and of elected representatives. Politics pervades more of daily life than conventional wisdom admits—so much so that it can be associated with the routine maintenance of a social formation. Routine maintenance, however, should be understood in two senses: as routinely performed maintenance and as the maintenance of routines.

An effort to elucidate the concept of a social formation, and, in particular, to articulate the relationship between politics and social formations, connects the chapters of this dissertation. Following the theorists of social formations I discuss below, I construe as *political* any process that actively forms, reforms, or transforms a given social formation. This thesis does not imply that everything is politics, but, rather, that every process has the potential to become political. The concept of a social formation connects politics with any of the processes—small or large, micro or macro, individual or collective—that structure, reproduce, and alter the world containing them. Politics within social formations is a common, diffuse process rather than a rare moment or event. The present study therefore focuses on continuously repeated activities rather than on occasional, delimited events such as voting, legislating, or the founding of new states. A

subordinate aim is to provide a charitable rebuttal to Hannah Arendt's increasingly influential thesis that politics is confined to "collective speech and action" (Arendt 1998). As an alternative to Arendt's theorization of political action, I use the concept of political activity.

To achieve these aims, I describe the ways in which bodily routines form, reform, and transform social formations. I examine four routines in particular: seeing, working, touching, and eating.<sup>1</sup> My focus on bodily practices seeks to fuse the original new materialism of Marx with the contemporary new materialisms of Bennett (2001, 2010), Connolly (2010, 2013), Latour (1993, 2005), and others (see Coole and Frost 2010). From the former I inherit a concern for understanding social formations as historically produced and material objects, and from the latter I take the commitment to document and emphasize the active contributions of matter in the maintenance and transformation of those social formations. The four chapters that follow depict the ordinary, everyday practices that maintain contemporary social formations but do so by equally highlighting the contributions of human and non-human objects, assemblages, things, and forces.

As an intervention into contemporary politics, this work endeavors to rebut key tenets of the intellectual program known as neoliberalism and to point to routine, bodily practices that might halt or reverse its increasing influence. Neoliberalism, according to Foucault's influential analysis, is characterized by three ideas: that market society is a "historico-natural given," was never created by humans, and has existed from time

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<sup>1</sup> I have chosen these four activities not because they provide a comprehensive picture of contemporary social formations but because they are widely practiced and have undergone fundamental changes over the last few centuries. Regimes of seeing, working, touching, and eating have changed more substantially, I suspect, than regimes of blinking, sneezing, or coughing (although they too have changed), while somewhere in between would be regimes of walking, sitting, and standing (see Joyce 2003). No part or process of the body is truly outside of history, but not all bodily activities transform at the same rate or with equivalent consequences.



immemorial; that the basic unit of society is the enterprise, rather than the individual; and that the state is subject to rather than in control of the market (Foucault 2010). Wendy Brown builds on Foucault's account and describes neoliberalism as a "political rationality" and an "order of normative reason" (2015, 22). Neoliberalism, as Brown notes, inverts Aristotle's ranking of the *polis* and the *oikos*, placing the concerns of the latter above those of the former (2015). For Aristotle, a household's material wealth was a prerequisite to participation in political affairs, but the purpose of material wealth was to enable the good life lived in the *polis*. For neoliberalism, however, the state serves the economy; the national government's primary role in neoliberal doctrine is to ensure that the national economy continues to grow.

Departing slightly from Foucault and Brown's positions, I understand neoliberalism as a program or agenda presupposing that "the economy" is an object of knowledge capable of being measured and represented numerically, that acquiring money and contributing to the growth of this economy through work or investment is the *telos* of human life, and that the role of the state is to support and enforce the optimal conditions for the growth of this economy. Brown claims that the rise of *homo economicus* has displaced or at least submerged the classical and early modern *homo politicus* (2015, 31). *Homo economicus*, however, is but one sub-species of *homo politicus*, not an entirely new species altogether. Neoliberalism does not displace politics but is itself a form of politics insofar as neoliberal practices maintain or transform a social formation. Each chapter to come investigates a different bodily activity in its neoliberal instantiation and in potential alternative variants.

Although a more thorough summary of the chapters concludes this introduction, for now I will briefly connect my arguments about seeing, working, touching, and eating to the general aims I have just outlined for the project as a whole. I begin with sight, critically exploring the ways in which the regular observation and measurement of national production constituted “the economy” as a real, material object. My investigation of the materiality of representations of the economy reveals that it is not a self-evident object in the world, as the first tenet of neoliberalism holds. On the contrary, the economy was created in the 1930s as part of a political effort to recover from the Great Depression, and, having outlived its creators, has now begun to inhibit rather than promote collective well being. From there I turn to the politics of working. By examining Marx’s arguments that distinguish human from machine labor, I demonstrate that Marx actually holds the peculiar ability of human labor-power to create value to be the result of politics and not of nature, as many Marxists assert. My interpretation treats machines and other mechanical assemblages as active participants in the creation of value within capitalist systems of production. I thereby describe the ways in which neoliberal economics distinguishes between human and machine labor as tools of domination and exploitation rather than as methods for increasing productivity. The following chapter explores the notion of a politics of touching by analyzing the poetry of Walt Whitman which envisions a new political order founded on comradeship—a distinct kind of friendship characterized by physical intimacy. This reading focuses on touching, a literal meeting of matter, and argues that the poems envision a polity that exists for the sake of physical encounters rather than for economic growth. The last bodily activity considered is eating. I contend that in the mid-twentieth century a new discourse of “eco-dietetics”

emerged out of social movements promoting seasonal, local, organic, and “Slow” food. This claim casts foodstuffs as integral components of any social formation rather than as inert materials functioning as mere fuel. What I call eco-dietetics, lastly, attempts to break neoliberalism’s hold over agricultural production by promoting environmentally sustainable and pleasurable over purely profitable food.

The remainder of this introduction situates these discussions within two theoretical developments, one concerning the concept of social formations and another about the character of politics itself. The concept of social formations, I argue, implies a corresponding understanding of politics as any process that forms, reforms, or transforms a social formation. The language of social formations, moreover, proves essential to understanding the four activities I examine. It allows for the description of diverse phenomena without relying on the nation-state as the primary point of reference, although without excluding the nation-state altogether. It enables analysis to shift between different levels of complexity and organization with relative ease. And it allows humans and non-humans alike to be discussed on equal terms.

### **Social Formations: Unlocking the Concept**

*As a constellation, theoretical thought circles the concept it would like to unseal, hoping that it may fly open like the lock of a well-guarded safe-deposit box: in response, not to a single key or a single number, but to a combination of numbers. (Adorno 1973, 163)*

In this section, I develop a theoretical account of social formations by contrasting them with two rival models for understanding society: Hegel’s concept of social totalities and Weber’s concept of social systems. In Hegel’s account of social totalities, all elements of a society correspond to a specific principle that forms the rational core of the totality. For Weber, by contrast, modern societies are systems characterized by the competition of

autonomous domains or value spheres. Social formations, as Marx and others describe them, are complex wholes in which permeable domains mutually influence each other either in conflict or cooperation. Each of these three models of society corresponds to an account of politics.<sup>2</sup> As I will explain more fully, the theories of social totalities and systems produce restrictive accounts of politics, whereas the theory of social formations engenders an expansive one.

Before turning to these three conceptual models, however, it is helpful to review briefly the social order problem as it has been taken up in the field of political theory. The problem, simply put, is this: why do human societies cohere and hang together, rather than devolve into chaos? Broadly speaking, political theory has provided three versions of an answer—republican, conservative, and liberal. The republican problematic connects the doctrines of Aristotle, Machiavelli, and Montesquieu.<sup>3</sup> For republicans, the solution to the threat of disorder, chaos, or the decline of a state is virtue. Virtue unites political glory, ethical piety, and martial victory. Republican theory thus attempts to construct state institutions that foster virtue among citizens. In the conservative account, which crystallizes in Edmund Burke, order is secured by universal or nearly universal submission to a hierarchy or ranking of classes, what Burke famously called “little

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<sup>2</sup> My distinction between social totalities, systems, and formations adds to Rancière’s schema of three possible relations between politics and society, what he calls archi-, para-, and meta-politics, associated with Plato, Aristotle, and Marx, respectively. Rancière defines archipolitics as the quest for “the complete realization of the *arche* of community” (2004, 65) and “the complete achievement of *phusis* as *nomos*” (2004, 68), or in other words, the naturalization and legitimation of a hierarchical order of domination. Parapolitics, by contrast, attempts to reconcile or adapt political institutions to an already existing, supposedly natural order (Rancière 2004, 71). Metapolitics, finally, subordinates politics to the realm of the social as superstructure and base, respectively (Rancière 2004, 83).

<sup>3</sup> In putting Aristotle and Machiavelli in the same camp, I side with Pocock and Skinner in their dispute with Strauss. Whereas Strauss describes Machiavelli as the teacher of evil and the antithesis of Aristotle the teacher of the good, Pocock describes both thinkers as the cornerstones of a lengthy tradition of republican political reflection (Strauss 1978; Pocock 1975). Pocock describes the problematic to which Aristotle and Machiavelli both contributed as the attempt sustain the existence of a secular, temporal republic with citizens who exercised virtue in the face of its opposite, fortune (1975, 53, 67). Skinner, likewise, views Machiavelli as the “exponent of a neo-classical form of humanist political thought” (2000, i).

platoons” (1999). A society is said to be composed of distinct orders or classes, typically the famous three estates: the clergy, the nobility, and everybody else. Order is threatened by those who attempt to depart from their station or allotted place in life.<sup>4</sup> In the liberal problematic, however, society is an aggregation of autonomous individuals rather than classes or orders. For liberals, then, the threat to stability and prosperity comes from the conflict and competition of the passions and interests of these distinct individuals. The liberal assumption that individuals are the basic units of a society connects the otherwise radically distinct works of Hobbes, Locke, and Rousseau.<sup>5</sup>

The theorists of social totalities and social systems, however, eliminate the problem of order in ways that will be described below. Behind the concept of the social formation, then, is the impetus to revive the problem of order that animated an earlier generation of political theorists. I will begin with Hegel’s notion of social totalities, proceed to Weber’s concept of social systems after a detour through Nietzsche, and

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<sup>4</sup> Burke was famously skeptical of liberal progress and reacted negatively to the democratic threat to a social order based upon nobility and the church, what he termed “the spirit of a gentleman and the spirit of religion” (1999, 448). The French Revolution, of course, quashed both, and “the glory of Europe [was] extinguished forever” (Burke 1999, 446). Burke turns to social structures and institutions that are mimicked in the English political constitution as they keys to ensuring stability. Nobility, “the graceful ornamentation to the civil order” (1999, 471) promotes peace as “one of the securities against injustice and despotism implanted in nature” (1999, 471). Of particular importance in this regard for Burke is inheritance, for the English “have given to [their] frame of polity the image of a relation in blood” (1999, 429). Just as the inheritance of property supposedly ensures that the noble landlord protects it for future descendants, the inheritance of authority by kings and nobles ensures they are concerned with the future of the realm (Burke 1999, 428). The state, moreover, requires the legitimation bestowed by an established church in order to “operate with wholesome awe upon free citizens” (Burke 1999, 454). Religion, Burke exclaims, “is the basis of civil society, and the source of all good, and of all comfort” (1999, 452).

<sup>5</sup> What these diverse authors share is not a commitment to a doctrine or ideology known as liberalism, but the liberal problematic or *dispositif* wherein social order is thought to be threatened by competing passions or interests of distinct individuals. With the possible exception of Rousseau in the *Discourses*, however, none of these authors truly asserts the existence of that figure Marx described ironically as “the individuated individual” (Marx 1996, 129). What they *do* assert is that individuals have distinct passions or interests that will inevitably come into conflict, but each in one way or another acknowledges that humans always exist in the presence of others. Hobbes, for example, asserts that individuals are *equal* by nature, but not that they are fully individuated or autonomous (Hobbes 1994, 74). Locke claims that individuals live in a society because of “strong obligations of Necessity, Convenience, and Inclination” (Locke 1988, 318). As I will discuss in chapter three, each of these authors acknowledges that marriages are natural relations and that humans exist in the form of families rather than individuated individuals.

conclude with my own account of the idea of social formations.

### ***Social Totality***

A social totality according to Hegel is a collection of individuals whose life in common is based on a rational principle and whose collective development is characterized by the gradual working out of this idea. Whereas the classical theorists of social order were concerned with the imminent breakdown of social order, especially those who had just experienced it first hand with the English Civil War or the French Revolution, in Hegel's model order is not threatened. What nominally appears as chaos, civil strife, or revolution is actually the unfolding of Spirit. For the theorists of social totalities, politics moves in lockstep with the society at large, mimicking and reflecting its fundamental characteristics.

In the unfolding of the *Weltgeist*, Hegel writes, “states, nations, and individuals arise with their *particular determinate principle*. This principle is displayed and actualized in their form of government and in the entire range of their conditions” (1988, 100).<sup>6</sup> Indeed, Hegel insists, “a people's form of government comprises one substance—one spirit—with its religion, its art, [its] philosophy [and] its culture in general” (1988, 48).<sup>7</sup> The principle at the core of every society, then, performs the crucial function of establishing and guaranteeing social order, or so I interpret the famous thesis that the real is rational. Hegel asserts that “a state is well constituted and internally strong if the private interest of the citizens is united with the universal goal of the state, so that each

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<sup>6</sup> All italics are original unless otherwise noted.

<sup>7</sup> The idea that particular nations or societies had unique temperaments was a common one and was supported by the Galenic medico-philosophical tradition. See chapter four for a further discussion of Galen and temperament.

finds its fulfillment and realization in the other.... Before this unity is brought into being, the state must undergo much struggle with private interests and passions” (1988, 27). The cunning of Reason, however, operates behind the backs, and through the actions, of world-historical individuals, ensuring that history unfolds according to plan (Hegel 1988, 35). During this historical process, social totalities rise and fall as units. At the end of history, with the triumph of absolute spirit, humanity will achieve its highest state of social order.

A now-rebutted but traditional reading of Marx that divides a society into a base and a superstructure drew from Hegel’s idea of social totalities.<sup>8</sup> In the early twentieth century, this Hegelian notion found its way into the first Marxist theories of nationalism. Otto Bauer, drawing on Hegel and Marx, defined a nation as “a community of character that has grown out of a community of fate” (2000, 7), while Stalin’s highly influential account defined a nation as “a historically constituted, stable community of people, formed on the basis of a common language, territory, economic life, and psychological make-up manifested in a common culture” (2013b, 6).<sup>9</sup> Both of these theories, then, relied upon or presupposed the Hegelian concept of a social totality.<sup>10</sup>

Within the social totality tradition, the political institutions of a people develop in lockstep with the society as a whole. Although for Hegel the state was the ultimate

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<sup>8</sup> See chapter two for a discussion of the history of interpretations of Marx.

<sup>9</sup> For Bauer, national character emerges as a set of people with similar personal characters comes up against a similar set of problems and acquires specific and common hopes. As the twentieth century opened, Bauer saw these problems and hopes as quite specific and linked them with the perils of capitalism: “national autonomy is not a program devised by clever men in order to rescue the state in its hour of need, but the demand that the proletariat necessarily voices ... that arises from the needs of its economic and political struggle” (2000, 258). The specificity of national proletarian communities, moreover, implies the need for specific forms of socialism. “The intellectual specificity of the nation,” Bauer argues, “shapes the specificity of socialism in each nation” (2000, 18).

<sup>10</sup> Later scholars of nationalism—especially Anderson (1991), Hobsbawm (1991), and Gellner (2009)—stress the imagined and constructed character of these national communities.

embodiment and expression of freedom and Spirit, in the traditional Marxist reading of Hegel, politics is cast as the derivative superstructure formed and determined by an economic base. Politics might be the highest or purest expression of a society's rational principle but its form and content are determined by more fundamental factors. Politics, like Spirit, lives a fragmented life, materialized as a superstructure but always pulling a people forward as spiritualized reason.

Although Hegel's critics were and are numerous, Nietzsche in particular established the philosophical basis for both the concepts of social systems and social formations. Both supplant Hegel's unified totality with fractured multiplicities. I will discuss each in turn, after introducing Nietzsche's contributions.

### ***The Nietzschean Intervention***

Both the theorists of the social system and the thinkers of the social formation (excluding Marx, of course) each adopt a Nietzschean image of the cosmos. Nietzsche's criticism of the unitary subject, and the unitary image of society based on it, animated a new tradition for studying social order. Like his predecessors, Hegel largely used organic metaphors for imagining and describing social totalities. Nietzsche replaces models of the body and cosmos as hierarchical, organic wholes with models of the body and cosmos as fields of multiple, competing forces, none of which are inherently more powerful than the others.

Nietzsche's most developed exposition of this cosmology comes in aphorism 1067 of *Will to Power*. Not surprisingly, the aphorism begins with a question: "And do you know what 'the world' is to me? Shall I show it to you in my mirror?" (1967, 549–550). Surprisingly, Nietzsche answers the question, although the rest of the passage—one



lengthy sentence with numerous colons, semicolons, and dashes—*performs* an answer as much as it expounds one. Nietzsche begins:

This world: a monster of energy, without beginning, without end; a firm iron magnitude of force that does not grow bigger or smaller ... not a space that might be ‘empty’ here or there, but rather as force throughout, as a play of forces and waves of forces, at the same time one and many ... a sea of forces flowing and rushing together, eternally changing, eternally flooding back, with tremendous years of recurrence, with an ebb and flood of its forms. (1967, 550)

Nietzsche rejects both the classical, republican vision of a cyclical cosmos and the modern, liberal vision of a progressive one. The Hegelian Spirit has no place in this world. The Nietzschean cosmos is a field of eternal competition between constantly changing and interacting forces. William Connolly has referred to this type of cosmos as a “world of becoming” (Connolly 2010). This world tolerates neither permanent hierarchy nor enduring identity. Aware of the boldness of the claims, Nietzsche asks towards the end of the passage, “do you want a *name* for this world? A *solution* for all its riddles?” In reply, he answers, “*This world is the will to power—and nothing besides!* And you yourselves are also this will to power—and nothing besides!” (1967, 550).<sup>11</sup> The closing gesture of the passage resurrects the classical isomorphism between the individual and the cosmos as micro- and macrocosm, respectively, but here both are characterized by multiplicity and contest rather than organic unity and purpose.

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<sup>11</sup> It is important not to fall into a phenomenological register when discussing Nietzsche’s account of willing. Nietzsche states directly, after all, that “‘willing’ is not ‘desiring,’ striving, demanding: it is distinguished from these by the affect of commanding” (1967, 353). Willing must be distinguished from wishing and desiring, not only because those are human-centric activities, but also because both concepts imply that intention is at work in willing. Willing for Nietzsche is more like a blind asserting, an attempt to *direct* some other process. To will means to command, not in the sense that a general commands an army, but rather in the sense that the force of gravity commands objects with mass to move closer to each other. Gravity, the strong force, etc.—all of these forces will other groupings of forces in the universe to act and order themselves in a certain way. The stronger will is the one that prevails. For Nietzsche, then, everything obeys some force insofar as it is living, which is to say, existing: “wherever I found the living, there I heard also the speech on obedience. Whatever lives, obeys. And this is the second point: he who cannot obey himself is commanded. That is the nature of the living” (1954, 226). Obedience comes, then, in two flavors: a force can obey its own commands or a force can obey the commands of another.

Nietzsche, moreover, reverses the direction of the classical analogy, going from cosmos to body rather than from body to cosmos. Such a reversal corresponds to Nietzsche's general attempt to identify, ridicule, and overthrow metaphysical human pride.

Each of these wills or forces, for Nietzsche, interacts with the world from a particular perspective, and this quasi-ontological perspectivism forecloses the possibility of the unified, absolute society that Hegel envisioned. Nietzsche emphasizes that "every center of force—and not only man—construes all the rest of the world from its own viewpoint, i.e., measures, feels, forms, according to its own force" (1967, 339). These centers of force can be of many kinds. They can be individuals, groups, discourses, etc. The point is that multiplicity replaces unity at the core of any society. Each force, process, and activity that is organized under a specific will, experiences not merely its own perspective on the world, *but experiences its own, entirely distinct world*: "it is obvious that every creature different from us senses different qualities and consequently lives in a different world from that in which we live" (Nietzsche 1967, 305). No unification into a totality is possible.

The implications of Nietzsche's arguments were far-reaching, although it was often up to Nietzsche's followers to work them out. As it pertains to my argument here, Nietzsche's critique of the unitary subject, and by extension the unitary society modeled on that idea of subject, motivated Weber's account of modern society as a fractured set of independent domains, which I will now discuss.

### ***Social System***

The theorists of social systems, taking their cue from Nietzsche, reject the notion of a unified social subject in favor of an image of society as a field of competing forces.

These competitions, however, do not resolve themselves or propel development as they do in Hegel. Nietzsche's perspectives or centers of force become for Weber disaggregated social domains.

In contrast to Hegel, Weber argues that modernity in Europe is characterized not by the triumph of Reason but by the disaggregation of a single, unified worldview (*Weltanschauung*) into many. He referred to these new, autonomous worldviews both as competing value-spheres and as "warring gods" whose "ultimate possible attitudes towards life are irreconcilable, and hence their struggle can never be brought to a final conclusion" (1981c, 152).<sup>12</sup> Indeed, Weber's influential account of disenchantment follows from this more fundamental diagnosis of European modernity and its fractured condition. The separation of the religious and scientific value spheres allowed the latter to develop and rationalize, free from the influence of the former. Many of his followers—Parsons, Luhmann, and Habermas, especially—each based their larger projects on this notion of disaggregation: between action-systems for Parsons (1991),<sup>13</sup> between social systems for Luhmann (1995),<sup>14</sup> and between system and lifeworld for Habermas

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<sup>12</sup> Weber is led to the warring gods metaphor by a reference to the elder Mill, to whom Weber attributes the notion that "if one proceeds from experience, one arrives at polytheism" (1981c, 147). He then proceeds to refer to "the struggle that the gods of the various orders and values are engaged in" (1981c, 148).

<sup>13</sup> For Parsons, modern society is characterized as a social system "analytically divisible into four *primary* subsystems"—the societal community, the cultural system, the political system, and the economic system (1971, 10). Each subsystem has a particular function and structure. They are, respectively, "integration, pattern maintenance, goal attainment, and adaptation" (1971, 11).

<sup>14</sup> Luhmann extends Weber's insights considerably, but introduces revolutionary principles along the way. The central, but not ultimate, unit of analysis for Luhmann is a system differentiated from an environment. The distinction system/environment "replace[s] the traditional difference between *whole and part*" that otherwise grounds most social scientific investigation (1995, 6). Instead of understanding society in terms of *subjects and actions*, then, Luhmann understands social systems in terms of *operations and communications*. The basic consequence of this move is quite clear, despite its radical nature: operations and communications can be performed by a vast number of entities or even processes, not just humans. Luhmann therefore rejects any anthropocentric concept of society; a social system for Luhmann is composed of communications with humans functioning "in their entirety, body and soul, as part of the environment of the social system" (2012, 9).

(1985b).<sup>15</sup> For Weber, however, the value spheres were each defined by a particular kind of rationality: instrumental rationality for the economic domain, value rationality for the religious, cultural, and aesthetic (Weber 1981c). Unlike Hegel's social totality, defined by a single rational principle, Weber's social system is divided into competing domains of rationality that will never unify and will "stand in irreconcilable conflict with each other ... now and for all times to come" (1981c, 147–8)

According to the theorists of social systems, politics is an inherently limited or confined activity that remains within its own distinct, autonomous domain. For Weber, political authorities have a "monopoly on the legitimate use of force" (1981a), and "it is this very appeal to violence that constitutes a political association" (Weber 1981b, 334). Weber also emphasizes that political actors follow a different moral code than others such that rationalized politics tends to take the form of bureaucracy (1981a). Luhmann defines the political system as the source of "collectively binding decisions" (1995, 2012). Schmitt's even more restrictive account—in which the political is inherently linked to the distinction between friend and enemy—fits squarely within this tradition as well (2007). Within a social system, politics inhabits its own distinct domain and performs its own particular function. The precise function might change over time or

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<sup>15</sup> Habermas comes close to this reading of Weber, but leaves Nietzsche out of the picture entirely. In Habermas' reading of Weber, the triumph of instrumental rationalization caused the disaggregation of modern societies (Habermas 1985a, chap. 2). Habermas consequently describes his theory as a reconstruction of Weber's, but one that includes a "more complex concept of rationality" and that refuses to equate rationalization in general with capitalism (1985b, 303). In my Nietzschean reading, however, it was the *failure* of Reason to manifest itself in a single form (e.g. as Hegelian Spirit) that left modern societies fractured. Leaving Nietzsche out of the picture leads Habermas to hold out hope that communicative rationality can triumph and reintegrate modern society: "it is only this communicative rationality, reflected in the self-understanding of modernity, that gives an inner logic—and not merely the important ruse of nature in revolt—to resistance against the colonization of the lifeworld by the inner dynamics of autonomous systems" (1985b, 333). In other words, by pluralizing the notion of rationality into several different versions, Habermas hopes to choose and promote the correct kind of rationality. The Nietzschean reading of Weber, however, rules out the possibility of the victory of a particular force and the consequent reintegration of society under its guise.

from thinker to thinker, but within the problematic politics inhabits a formally delimited world.

The concept of social formations, which I explore in the next section, accepts the Weberian premise that modern society is fractured into distinct domains, but departs from the emphasis on the autonomy of each sphere.

### ***Social Formations***

A social formation, unlike a social totality or a social system, is neither a unity expressing an inner core nor a disaggregated system of autonomous sub-domains, but a complex whole whose component domains, forces, and agents mutually influence without wholly determining each other. As Chambers argues, the concept “points to the way in which the fabric of ‘society’ ... is formed by threads that are simultaneously economic, political, and cultural.... [T]o theorise the social formation means to see these not as distinct spaces but as interpenetrating logics, as intermixed, porous domains” (2014, 11). Mary Poovey insists, similarly, that “the complex process by which the boundaries of domains are negotiated ... introduces fissures that undermine the coherence of what otherwise seem to be self-consistent, even totalizing domains” (1995, 7). A particular social formation is an assemblage of multiple, interacting—even contradictory—processes, not a precursor or essence that finds expression in history. None of these processes can be said in advance to be more important than any others; social formations are therefore more rhizomatic than they are arboreal (Deleuze and Guattari 1987). Social formations are not bounded by stable geographical boundaries, and they are populated not just by humans, but by non-human actors and forces as well. The term formation, in addition, implies that societies are always in the process of forming, reforming, and transforming themselves. If they

endure, they do so because a successful mechanism ensures their routine maintenance by means of continual reproduction. Like the human body whose cells are replaced every seven years or so but which retains an abstract identity, a social formation endures even as the individual units composing it change, die, or are replaced. It is in this sense that they differ from actor-networks, a point with which I will conclude this section.

The phrase social formation itself is a loose translation of the German *Gesellschaftsformation* as used by Marx. Importantly, *Formation* in German implies an ongoing process of development rather than a completed result. *Gesellschaft*, usually translated as society, is not the same as the German word *soziale*, and it carries the connotations of advanced, organized civilization rather than simple, communal living. Something like “the continuous process whereby a particular, complex society acquires and maintains its form” would be more accurate, but is obviously too cumbersome. When I use “social formation” I therefore mean to carry along all of the baggage that comes with the German meaning.

More often than not, however, Marx uses the phrase *ökonomische Gesellschaftsformation*. In his discussion of the rate of surplus value, for instance, he claims that “only the form wherein the surplus labor is extracted from the immediate producer, the laborer, distinguishes *ökonomischen Gesellschaftsformationen*, for example, the society of slaves from the society of wage-laborers” (Marx 1962, 231, my translation).<sup>16</sup> The reading I wish to avoid most of all, however, holds that Marx tends to

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<sup>16</sup> The original reads: “Nur die Form, worin diese Mehrarbeit dem unmittelbaren Produzenten, dem Arbeiter, abgepreßt wird, unterscheidet die ökonomischen Gesellschaftsformationen, z. B. die Gesellschaft der Sklaverei von der der Lohnarbeit.” Simply translating the main clause as “the form ... distinguishes economic social formations” does not work in English because the relationship between the two adjectives lacks the subordination of economic to social, the latter of which is part of a proper noun in the original. “Distinguishes the economic developments of social formations” comes closest but requires doubling *Formationen* into developments and formations. In another representative passage, Marx observes that “in

attach *ökonomische* to *Gesellschaftsformation* because only economic elements matter to him in the study of social formations. This reading finds support in the classical interpretations of Marx which identify his central discovery with the thesis that social, political, legal, and intellectual ideas are “determined by” the material structures of economic production (Engels 1978; Stalin 2013a; Lukács 1971; McLellan 2006; Cohen 2000; Mandel 1981). The *locus classicus* of this interpretation is the “1859 Preface” where Marx writes that “the totality of these relations of production forms the economic structure of society, the real basis from which rises a legal and political superstructure, and to which correspond specific forms of social consciousness. The mode of production of material life conditions the social, political, and intellectual life-process generally” (1996, 159–160). As Terrell Carver has argued, however, the classical interpretation mischaracterizes the text, which intends to offer a “guide to further study” rather than a formal or empirically-derived law (1982, 23) and which uses the word determine in the more limited sense of conditions or sets the boundaries of possibility of X rather than wholly decides the outcome of X (1982, 34). Following Carver, then, we can say that Marx investigated the economic components of capitalist social formations not because they alone mattered, but as one component of a larger social structure. Marx’s point, then, was that the economic and political domains influenced each other, sometimes through conflict and sometimes through complementarity. His study of the capitalist social formation in nineteenth-century England, as I show in chapter two, fuses an analysis of political, legal, literary, economic, scientific, and religious transformations.

Before Marx, however, there were some significant proto-theorists of social

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*ökonomischen Gesellschaftsformationen* of the most diverse kinds, there occurs not only simple reproduction but also, though in varying degrees, reproduction on an increasing scale” (1981, 745).

formations; Tocqueville stands out. Although he does not use the phrase social formation, Tocqueville's approach shares many of the premises of the explicit theorists of the concept. In short, Tocqueville turns to America for lessons about democratic social order with the overarching goal of constructing appropriate laws and political institutions for present and future democracies. Although he considered democracies and aristocracies to be political regimes, he analyzes America as a social formation with its own geography, laws, mores, and institutions. Tocqueville begins from the presupposition that "the gradual progress of equality is something fated" (2000, 12). His claim that America is above all else characterized by an "equality of conditions" thus grounds and frames the entirety of his analysis, especially his proclamation that "a new political science is needed for a world itself quite new" (2000, 12). Democracy, in other words, inaugurated a new social formation: "the links which formerly bound men together have been destroyed or altered, and new links have been formed" (Tocqueville 2000, 417). Early in the work he therefore notes that "one must first study their social state if one wants to understand a people's laws and mores" (2000, 50). He even concludes the chapter on the American social state with an appendix on its "political consequences" (2004, 56). Tocqueville's project, then, provides a significant model for the study of social formations.

More recently, Chambers has developed Marx's concept of the social formation by drawing on Althusser's readings of Marx, Rancière's account of politics and police orders, and Bentley's study of interest groups (2014). He notes that "the key for Marx is to understand social formations as complex, uneven, and *rich* totalities, rather than taking them as simple, monolithic entities" (2014, 100). Over the course of eight hypotheses, Chambers distinguishes social formations from (1) aggregations of autonomous



individuals; (2) communities created by compact, contract, or consent; (3) communities constituted by the pursuit of justice; (4) normatively redeemable orders; (5) empirical or physical objects; (6) totalities; (7) systems; and (8) natural hierarchies (2014, 20–26). The most peculiar item on this list is number five. Chambers describes the social formation as an object of knowledge rather than an ostensive entity (2014). For Chambers, “the social formation is not itself an object in any empirical sense. To theorize the social formation, or to give an account of it, is therefore to ‘produce’ it conceptually as an ‘object of reflection’” (2014, 11). Chambers’ claim does not imply that the social formation is merely ideal, but rather that an account of the social formation can only describe an object of knowledge, not the real object itself (2014). An object of knowledge is nonetheless real, material, historically produced *and* abstract. Social formations are constituted by and emerge out of material networks, but to identify or describe a social formation requires selecting certain objects of description and abstracting them from the world at large. The implication of the argument is that all phenomena—whether political, legal, cultural, etc.—must be understood *as part of a larger whole*, i.e. a social formation, no matter how independent or autonomous they seem.

The sociologist Norbert Elias’ term is “social figuration,” but I interpret the concept to be nearly synonymous with the idea of a social formation developed by the authors mentioned above. Situating his concept within a larger critique of the liberal distinction between “the individual” and “society,” Elias rejects the (liberal) idea of autonomous individuals, what he calls the “closed personality,” in favor of a focus on the “networks of interdependencies” that bind “open personalities” together (1994, 213). Elias continues:

such interdependencies are the nexus of what is here called the figuration, a structure of mutually oriented and dependent people. Since people are more or less dependent on each other by nature and then through social learning, through education, socialization, and socially generated reciprocal needs, they exist, one might venture to say, only as pluralities, only as figurations. That is why, as was stated earlier, it is not particularly fruitful to conceive of men in the image of the individual man. It is more appropriate to envisage an image of numerous interdependent people forming figurations (i.e. groups or societies of different kinds) with each other. (1994, 214)

Elias elaborates his concept of social figurations by comparing them to various kinds of dances. He suggests that “the image of the mobile figurations of interdependent people on a dance floor perhaps makes it easier to imagine states, cities, families, and also capitalist, communist, and feudal systems as figurations” (1994, 214). Like Marx, Althusser, and Chambers, Elias describes these figurations as both material and abstract. They are material because “one can certainly speak of a dance in general, but no one will imagine a dance as a structure outside the individual or as a mere abstraction. The same dance figurations can certainly be danced by different people; but without a plurality of reciprocally orientated and dependent individuals, there is no dance” (1994, 214). But Elias also stresses that dances are abstract, for “like every other social figuration, a dance figuration is relatively independent of the specific individuals forming it here and now, but not of individuals as such” (1994, 214). Dances, moreover, are distinguished by some ritual, some routine, or some repetitive motion, and they are complex and multifarious rather than unitary and rigid. While sometimes a single dance involves all of the dancers, sometimes pairs or groups of dancers move independently, but always somewhat in synch, even if negatively, with the motions of the others. What Elias does not mention, but which seems equally obvious, is that dances are also composed not just of the human dancers, but the floors that provide a space, the clothes that diversify the field of vision, the music (audible or silent) that provides the rhythm, and so on.

Although this concept of social formations shares much with the field of Actor-Network Theory (ANT), there are a few significant differences worth pointing out. According to Latour, “the social cannot be construed as a kind of material or domain” (2005, 1). Latour instead describes a social assemblage as a “train of associations between heterogeneous elements” (2005, 5). The actor-networks that Latour traces therefore exist only in the concrete and the particular, never in the abstract. With characteristic flourish, Latour notes: “whenever anyone speaks of a ‘system,’ a ‘global feature,’ a ‘structure,’ a ‘society,’ an ‘empire,’ a ‘world economy,’ an ‘organization,’ the first ANT reflex should be to ask: ‘In which building? In which bureau? Through which corridor is it accessible? Which colleagues has it been read to? How has it been compiled?’” (2005, 183). This reflex to reject all abstractions, while useful for ethnographic and descriptive purposes, can interfere with critical inquiry designed to modify or transform a social formation. An actor-network forms the condition of possibility for the existence of a social formation, but the latter can endure even as the former changes considerably.

Social formations therefore endure as “real abstractions” rather than as concrete, particular actor-networks. Like a dance which continues on even when the dancers have been replaced, social formations continue so long as the processes that constitute them renew and repeat themselves. In his discussion of social systems, Luhmann notes that “reproduction is a continuous problem.... All elements pass away. They cannot endure as elements in time, and thus they must constantly be reproduced on the basis of whatever constellation of elements is actual at any given moment” (1995, 49). Although Luhmann means to describe the particular kind of system he spent several books theorizing, I find

his conclusion to have a general applicability. Social formations endure only insofar as their constituent processes are renewed or repeated on a continual basis, i.e. insofar as they undergo both senses of *routine maintenance*. A dance can continue with new dancers or in a new setting, but a new dance routine or choreography constitutes a new dance altogether. I will return to this argument in the next section, but for now it suffices to say that I designate as politics those processes that ensure the reproduction (with a difference) of a social formation.

Each model of society that I have described in this section produces and corresponds to a particular account or theory of politics. The three accounts I briefly reviewed from the history of political thought—the republican, conservative, and liberal answers to the problem of social order—construe politics as the pursuit of virtue, as the maintenance of hierarchy, and as the accommodation or balancing of competing interests, respectively. The two models I discussed in more detail—the social totality and the social system—fit the pattern as well. Within a social totality, politics occupies a paradoxical or contradictory position. Political institutions are the material expression of a society’s rational core, but the development of that society is propelled by the slow perfection and improvement of those institutions. Within a social system, the political domain is just one distinct, autonomous domain among many and has a specifically proscribed function. For Weber, the state has a monopoly on the legitimate use of force and backs up or enforces the rules and laws of the other domains. Within a social formation, however, politics has neither an essence nor any predetermined limitations. Any process or activity that reproduces or transforms a social formation does the work of politics. The next section provides a more thorough exposition and explication of this thesis.

## **Confining and Expanding the Political**

Using the concept of a social formation supports and aligns with an expansive rather than a restrictive definition or understanding of politics. In the preceding section I explored how two competing models for understanding society imply or presuppose restrictions on politics. The social totality framework confines politics to the expression of a rational core or economic base, while the social system framework limits it to deciding and coordinating interests under threat of violence. The framework of social formations, by contrast, expands politics to include whatever processes reconstitute or alter a set of routines and practices. In this section, I will discuss two political theorists—Arendt and Rancière—who explicitly offer and defend a restrictive account of politics. Arendt limits politics to collective speech and action, and Rancière restricts it to the momentary re-partitioning of the sensible.

An expansive rather than restrictive concept of politics is important for two reasons, one general and the other contemporary. Generally speaking, an expansive conception of politics opens up more elements of the world to contestation, re-imagination, and reconstruction (Unger 2004a). To designate an institution, norm, or routine as political remains one of the more powerful rhetorical tools for justifying critical scrutiny of it. In our contemporary conjuncture, an expansive definition of politics is necessary to resist the neoliberal separation of economic and political spheres coupled with the insistence that markets should somehow be isolated and independent from politics.

I will begin with Arendt, advocating a shift from the study of political action to one of political activity. From there I will turn to Rancière's distinction between politics

and police in order make a claim about the processual character of politics in a social formation.

### ***From political action to political activity***

In her comparative study of the American and French Revolutions, Hannah Arendt criticizes the American Constitution for confining the sphere of political action—what she calls the space of appearance for freedom—to the halls and rooms of the national and state legislatures. Drawing on some of Thomas Jefferson’s writings, she notes that the American Revolution, “while it had given freedom to the people, had failed to provide a space where this freedom could be exercised. Only the representatives of the people, not the people themselves, had an opportunity to engage in those activities of ‘expressing, discussing, and deciding’ which in a positive sense are the activities of freedom” (2006, 227). Arendt, however, was both right and wrong. She was right to criticize the American founders for attempting to delimit the arena of political action, but she was wrong to claim that they had in fact succeeded. The activities of “expressing, discussing, and deciding,” while undoubtedly political, do not exhaust any list of political activities.

Although we often suppose that politics only happens in legislatures and bureaucracies, we do so mistakenly, for politics has never been successfully confined to a single place. Humans cannot escape being political because it was politics which created humans, not humans who created politics (see Ferguson 2014).<sup>17</sup> This claim presents a

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<sup>17</sup> Kennan Ferguson has argued that “if non-humans can be said to have had politics, then political and social forms may well have played a central role in the development of humanity” (2014, 170). Ferguson grounds his claim in the paleontological discovery that most humans have Neanderthal DNA, a finding which confirms not only that humans and Neanderthals coexisted but also that they interbred. If humans and Neanderthals (and Denisovans, etc.) interbred and lived together, we can safely assume that the Neanderthals and other extinct, non-human hominids practiced politics amongst themselves and with *homo*

radical challenge to much of Western political thought which, along with the governments established under its influence, has nonetheless attempted to confine political action either to a certain group of people or to a certain physical space—whether to humans, to men, to philosophers, to kings, to philosopher-kings, to propertied individuals, to the nobility, to parliaments, to generals, to white people, to virtuous individuals, to laborers, to the *sans-coulottes*, and even to priests.

The American Constitution in particular, as Arendt and number of other thinkers inspired by Thomas Jefferson and Charles Beard have argued, was explicitly designed to restrict rather than to expand the possibilities of political action (Beard 1986; Jefferson 1787, 1816; Levinson 2008; Unger 1977, 1986; Wolin 1994).<sup>18</sup> As such, the activities that it protects above all else are few in number: property owning, guns included; voting; speaking broadly construed (today including contributing monetarily to campaigns and

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*sapiens*. Ferguson thus reveals the political constitution of humanity as a species. I will focus on the political constitution of the routines of human bodies.

<sup>18</sup> According to these authors, the American Constitution constrains politics in a number of ways. Most obviously, in its initial form it excluded most individuals from voting (women, slaves, etc.). But just as importantly, the Constitution establishes several limitations on political action by the several states. For Charles Beard, some of the most important restrictions at the moment of ratification were the Contracts Clause, which prohibits states from waiving or abrogating debts, and the federal monopoly on the printing of money, which effectively prohibits those states from minting currency in order to devalue those same debts (Beard 1986). For Wolin, the Constitution constrains the democratic mode of life that is embodied in the Declaration of Independence—a “self-discovery of common concerns and modes of action for realizing them”—in favor of a rigid and frozen institutional regime of power distribution (1994, 11). Wolin argues that the Constitution prevents future expressions of such self-discovery and modes of action because it channels political energy into the bounded institutions of the nation-state (1994, 12–13). In sum, Wolin claims, constitutions “regulate the amount of politics, the temporal rhythms or periodicity of politics, and they give it ritualistic forms” (1994, 14). Democratic politics, by contrast, breaks with or fractures such constraints, much as the Declaration sought to overthrow the political regime of the British; “revolutionary transgression is the means by the which the demos makes itself political” (1994, 18). Levinson and Unger both focus on the nearly insurmountable barriers the American Constitution places in the way of amendment. In this sense, the Constitution holds the living Americans hostage to the political institutions set in place by their dead predecessors. Unger, moreover, goes further than Levinson and insists that constitutions should have mandated amendments on a regular bases. This line of thought can be traced to Thomas Jefferson’s critiques of the Constitution; Jefferson, in France during the Constitutional Convention, wrote letters expressing his adamant belief that “the tree of liberty must be refreshed from time to time with the blood of patriots & tyrants” (Jefferson 1787) and his desire to “provide in our constitution for its revision at stated periods” (Jefferson 1816). The Critical Legal Studies movement mounts a similar critique of liberal jurisprudence, especially in the Anglo-American legal tradition (Unger 1986).

the practicing of religion); and legislating.<sup>19</sup> A good case can be made that protesting or other forms of civil obedience rise to the level of authentic politics, but protests in America—whether Shay’s rebellion or the so-called riots of Ferguson and Baltimore—seem more often to be met with police violence than to be embraced by leading politicians. All the other activities undertaken by American citizens are said to be social or economic and confined to this private sphere. While voting and speaking (however broadly defined) are actions that can be taken by anyone, on their own they do not amount to very much. Even if an individual is eligible to vote, she may only exercise that right on one day every few years; she will probably wait in line while doing so. Anyone can speak, of course, but reaching a large enough audience usually requires substantial wealth.

One fatal consequence of this concatenation of circumstances and beliefs is a general acquiescence to the notion that politics is a profession and the corollary belief that one can either do politics or something else, but not both.<sup>20</sup> The professionalization of the American political elite is certainly not unique, but it is both intimately linked to and continuously supported by the design of the Constitution, as Beard and Arendt so astutely pointed out. It is also reinforced by the hegemonic understanding of politics according to which authentically political action happens only rarely and is preceded by a lengthy process of deliberation and decision—an understanding of politics that Arendt played no small part in developing.

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<sup>19</sup> Arendt notes, by contrast, that the Greeks considered legislating a pre-political activity; laws, like the walls of the city, were a prerequisite to the proper functioning of the polis, not its outcome (1998, 194; see also Reyna).

<sup>20</sup> Weber traces the development of “politics as a vocation” back to the princely advisers of medieval-European courts and highlights the importance of party politics in elevating professional politicians throughout the course of the nineteenth century (Weber 1981a).



Contemporary political theory has continued to echo this belief. Arendt, herself a leader of this trend, argues that “the specifically political forms of being together with others [are] acting in concert and speaking with each other” (1998, 162). Arendt’s emphasis on acting and speaking provides a welcome rejoinder both to technocratic and bureaucratic trends in political practice and to the behavioral turn in political science. Arendt, however, establishes the political character of collective speech and action by distinguishing them from the activities of the (supposedly) non-speaking body, activities which she calls the “life process.” Building upon Arendt’s concepts, Habermas has developed his theory of communicative action, along with an entire philosophical apparatus to justify it. Some of Arendt’s early and influential interpreters, moreover, emphasize the importance of her novel concept of action (Canovan 1992; Honig 1993; Villa 1996).

With this idea of action in mind, both professional and public intellectuals have constantly repeated the dictum that Americans have become apathetic about and retreated altogether from the domain of politics.<sup>21</sup> The statistics gathered by think tanks and newspapers seem to confirm that this problem in fact exists, especially with respect to the number of eligible voters who actually cast ballots in elections (New York Times 2014). But the problem is not with the people, as the talking heads would have us believe; the problem lies in the meaning they—and the North Atlantic social formation at large—have given to the concept of political action. Citizens might be apathetic about voting, but they are not thereby apolitical. Politics has continued unabated, albeit largely unnoticed and unappreciated. The so-called voter apathy problem shrinks dramatically when we recognize that voting is neither the most important nor the most common political activity

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<sup>21</sup> See, for example, Putnam (2001).

that an individual undertakes. Part of the contemporary dissatisfaction with politics stems from the constitutional constraints Arendt identifies; it is easy to disdain and ignore that which one has little or no hope of influencing. But this mood is as much a product of constrained imagination as it is a consequence of restrictive political institutions.

The infatuation with this particular concept of action, just like the American Constitution, passes over and remains silent about a large chunk of actual, factual politics. The activities I will discuss—eating, touching, seeing, working—would not meet Arendt’s requirements, however loosely or stringently they are defined. Rather than compete with Arendt over the term *action*, then, I prefer to use the more humble term *activity*. Unlike extraordinary actions, ordinary activities are recurrent and common.<sup>22</sup> As a result, it is they that do much of the work to sustain social formations.

### ***Politics as Process vs. Politics as Event***

Another particularly prominent method of confining the political, distinct from Arendt’s but similar in implication, has been to define it as a momentary or rare event. Theorists of politics as an event would include a set of Heideggereans that Oliver Marchart has called “post-foundational” and, I will argue, Jacques Rancière.<sup>23</sup> In contrast to the theorization of politics as an event, I describe it as a continuous process. In prioritizing process over

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<sup>22</sup> This distinction shares Thomas Dumm’s concern with the politics of the ordinary (1999). Whereas Dumm’s concern for the ordinary derives from Wittgenstein and Cavell, mine is rooted in Marx and Althusser’s concern with social formations.

<sup>23</sup> For Marchart, post-foundational political thought works with a fundamental distinction between “politics” and “the political” that lines up with Heidegger’s distinction between beings and Being (2008, 7). In this schema, politics “remains a specific discursive regime, a particular social system, a certain form of action,” whereas the political “assumes the role of something which is of an entirely different nature: the *principle* of autonomy of politics, or the *moment* of the institution of society” (Marchart 2008, 8). For all of the theorists Marchart describes, the political is an incomplete or absent ground of politics (2008, 154). Politics without the political is thus “post-foundational.” This line of thought associates the political only with rare moments of foundation or crisis.

event, I follow in the vein of Arthur Bentley (1995) and Alfred North Whitehead (2010), whose works I will discuss briefly after turning to Rancière.

Rancière's interventions begin with the distinction between police orders and politics; the former enforces a partition of the sensible that codes some activities as speech and others as noise (Rancière 2004). Politics, by contrast, "exists when the natural order of domination is interrupted by the institution of a part of those who have no part" (2004, 11).<sup>24</sup> Politics is possible because "no social order is based on nature, [and] no divine law regulates human society" (2004, 16). Rancière, however, maintains that "politics doesn't always happen—it actually happens very little or rarely" (2004, 17). For Rancière, police orders exist most if not all of the time (see Chambers 2013). Police orders endure in the moments between political interruptions. Like theorists of the political event, Rancière posits the *paucity of politics*.

Rancière defines the police as "an order of bodies that defines the allocation of ways of doing, ways of being, ways of saying, and sees that those bodies are assigned by name to a particular place and task; it is an order of the visible and the sayable that sees that a particular activity is visible and another is not, that this speech is understood as discourse and another as noise" (2004, 29). More concisely, he argues that "the essence of the police is neither repression nor even control over the living. Its essence is a certain manner of partitioning the sensible" (Rancière 2001). Moments of politics disrupt and disturb these police orders by reconfiguring what can be seen, what can be said, and who can say it. Chambers demonstrates that Rancière's theory of politics is not "pure" insofar

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<sup>24</sup> Rancière's paradigmatic example was the retreat of the Roman Plebeians to the Aventine hill. Before this action, the Roman patricians refused to recognize that the plebs were political, i.e. speaking, beings. When the plebs retreated to the Aventine, they forced the patricians to speak to them as equals and acknowledge their existence within the Roman state (Rancière 2004).

as politics requires the existence of a police order to interrupt (2013, 45–50), but Rancière nonetheless has an account of politics as an event. He acknowledges that “there is a historical dynamic of politics,” but characterizes this dynamic as a “history of events” (2011, 5).<sup>25</sup>

Like the political action paradigm with its challenges to technocratic and bureaucratic developments, Rancière’s account of politics as a disruptive event usefully highlights the persistence of inequality and domination in regimes of so-called liberal democracy.<sup>26</sup> But both ultimately pass over what I call activities of routine maintenance—bodily processes for Arendt, police orders for Rancière—not in silence but with disdain. Both theorists leave too much out of the picture. If Arendt’s account inadvertently lends credence to the notion that voter apathy implies a general withdrawal from politics altogether, Rancière’s does the same to the notion that any fundamental change to a social formation requires a crisis. As Roberto Unger puts it, a crisis or “calamity—often in the form of economic collapse or armed conflict—can break any order. Even in the partly democratized societies of the contemporary world, those who would reform the established social order will ordinarily need to count on crisis as their ally” (2009, 42–43). Some moment of crisis, I suspect, lies behind each of the political events that Rancière describes. The relative rarity of major crises on the human time scale would perhaps explain the paucity of politics for Rancière. In contrast to an account of politics as transformative events, I turn instead to the transformative powers of processes of maintenance.

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<sup>25</sup> To be extra-charitable to Rancière, he does not himself place much emphasis on the idea that politics takes the form of an event. More important for Rancière is that politics instantiates a logic of equality in the face of an unequal, hierarchical order of domination.

<sup>26</sup> See Chambers (2013) for the argument, via Rancière, that liberal democracy is a contradiction in terms.

The process theorists of the twentieth century were an eclectic bunch, but I will focus on three: Arthur Bentley, Alfred North Whitehead, and Gilles Deleuze. Despite their radically distinct intellectual backgrounds, each comes to similar conclusions about the relationship between maintenance, process, and repetition. In short, they each suggest that the endurance of an object requires the repetition of the processes that maintain it. In his early twentieth-century study, *The Process of Government*, Bentley announced that “we have one great moving process to study, and of this great moving process it is impossible to state any part except as valued in terms of the other parts” (1995, 178). Bentley’s insistence that his object of study is “one great moving process” questions the validity of a strong distinction in kind between maintenance and transformation. Whitehead, a contemporary of Bentley’s, likewise argues in *Process and Reality* that “the actual world is a process,” and that a “process is the becoming of actual entities” (2010, 22). The endurance of an actual entity in time requires the continual renewal of its process of becoming. Without such renewal, all processes are subject to the “perpetual perishing” generated by time (Whitehead 2010, 340). This claim of Whitehead’s, moreover, anticipates and resonates with Deleuze’s rejection of pure or bare repetition (Deleuze 1994). Repetition, Deleuze maintains, is always repetition with a difference. The renewal of a process by means of routine maintenance, then, subtly but surely introduces differences over time. An actual entity (read: a social formation) endures because the process that constitutes it is renewed and repeated, but each repetition carries with it a fraction of a difference.<sup>27</sup>

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<sup>27</sup> Gender provides a familiar example of something constituted through repeated performance. Judith Butler argues that gender is “performatively constituted by the ‘expressions’ that are said to be its results” (2006, 33) and thus that “as in other ritual social dramas, the action of gender requires a performance that is *repeated*” (2006, 178). Gender, Butler insists, “is an identity tenuously constituted in time, instituted in an

Rancière's distinction between police and politics therefore stands on the back of a more fundamental qualitative distinction between maintenance or reproduction and transformation or disruption. The theorists of process, along with chapters that follow, question the validity of this strong distinction.<sup>28</sup> Police orders endure because their particular formations, institutions, and patterns are reproduced regularly. To repurpose a claim of Adorno's, a social formation "does not lead a life of its own over and above that which it unites and of which it, in its turn, is composed. It produces and reproduces itself through its individual moments" (1976, 107). As I argued in the previous sections, social formations, like other assemblages, endure because the actual occasions that constitute them repeat themselves and form an enduring process. Police orders are just extremely complex dances. Any act of reconstitution—whether it changes the institutions being reconstituted substantially, just a little bit, or in a barely perceptible way—is still a political act.

I have reviewed Arendt and Rancière's accounts of politics in order to elaborate and develop the account of politics implied by the idea of social formations. In contrast

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exterior space through a *stylized repetition of acts*" (2006, 179). Butler's argument implies forcefully that gender is formed in particular social formations, not by nature. See, Chambers (2014), however, for the argument that Butler lacks an account of social formations.

<sup>28</sup> Unger makes a similar point in placing the distinction between context and routine at the center of his inquiries. "The distinction between formative structures and formed routines," Unger claims, "is central to our understanding of society and history" (2009, 4). Contexts are the institutions and ideologies that inform action, whereas routines are those actions that follow. A routine, however, may or may not overflow beyond its context with reverberating effects. Indeed, two relationships are possible between routines and contexts. On the one hand, routines can preserve or replicate the context that engendered them. On the other hand, routines can transform or dismantle their context (see Butler 2006). In other words, the distinction creates "a sharp contrast ... between two kinds of activities: the normal activities that move within the context and the extraordinary transformative acts that change the context itself" (Unger 2004b, 21). For Unger, the goal is to "shorten the distance" between these two kinds of activities—to make everyday routines context transforming. According to Unger, "all the major aspects of human empowerment or self-assertion depend on our success at diminishing the distance between context-preserving routine and context-transforming conflict" (2004b, 8). In my reading of Unger there is no qualitative, essential difference between routines that preserve their context (police for Rancière) and routines that transform them (politics). No matter what, contexts have to reproduce themselves. They do not endure on their own. What Unger describes as an ideal to be achieved, I take to be a quasi-ontological condition.

with Arendt's account, politics in a social formation is not limited to collective speech and action. In contrast with Rancière's position, politics in a social formation is continuous and processual rather than an uncommon event. Before reviewing the chapters that follow, however, I will briefly survey the methodological issues for reading texts as political that the concept of social formations implies.

### **A Note on Method**

The theoretical methodology I use in the following chapters embraces historical contextualization alongside an effort to read works in ways their authors may not have foreseen. I believe that just as historical context can reveal what was possible to think and write at a given time, close attention to texts themselves can transcend historical limits and reveal new applications for central concepts. In other words, I am committed not only to contextualist reading of works in light of the discursive limits that shape them but also to the creative re-interpretation of texts in ways their authors may not or could not have imagined. The paradigmatic defense of the contextualist method comes from Quentin Skinner (1969). I know of no single text that outlines what I am calling the creative method, but Nietzsche's scattered comments about language provide much of the intellectual support for it.

Skinner rejects both the notion that texts themselves can sufficiently convey an author's purpose and the notion that simply referring to context can illuminate or explain a text's ideas. Context for Skinner thus does not refer to the "determinant of what is said" but instead to the "ultimate framework for helping to decide what conventionally recognizable meanings, in a society of *that* kind, it might in principle have been possible for someone to have intended to communicate" (1969, 49). He maintains that "the

essential question which we therefore confront, in studying any text, is what its author, in writing at the time he did write for the audience he intended to address, could in practice have been intending to communicate by the utterance of this given utterance” (1969, 48–49). In order to reach this understanding, however, a reader must first “delineate the whole range of communications which could have been conventionally performed on the given occasion by the utterance of a given utterance, and, next, to trace the relations between the given utterance and this wider *linguistic* context as a means of decoding the actual intention of the given writer” (1969, 49). This awareness of the whole range of communications, in particular, alerts the reader to the absence of a particular phrase or argument. For Skinner, the absence of a historical account of England in Locke’s *Second Treatise* is an especially significant example (1969, 47), as is the absence of humanist rhetoric from Hobbes’ works (1996). For Skinner, then, historical context reveals what it was possible for a particular author to say and mean at a given point of time with a specific audience in mind. For me, however, context reveals what it was *not* possible to say.<sup>29</sup> Knowledge of discursive context can uncover the limits of what could be thought as rational and even self-evident. The chapters that follow document and analyze the absence of several critical concepts in places they are often assumed to exist. I will concentrate on the absences of three concepts in particular: of a notion of “the economy” in the texts of political economists before the 1930s; of a “labor theory of value” in Marx’s works; and of a concept of “homosexuality” in Whitman’s poems.

Although the creative method of interpretation has no single inspiration, Nietzsche is as good of a source as any. Nietzsche’s analysis of the metaphysical

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<sup>29</sup> This claim draws from a minor thread in Foucault’s *Archeology of Knowledge*. He writes, for example, that “we are studying statements at the limit that separates them from what is not said, in the occurrence that allows them to emerge to the exclusion of all others” (1972, 119).



“seduction of grammar” combined with his celebration of his own untimeliness support an approach to texts that encourages creative re-application or development of an author’s ideas, concepts, and theses. For Nietzsche, the “seduction of grammar (and of the fundamental errors of reason that are petrified in it)” engenders the belief in a subject who precedes action, or in this case, writing (2010, 45). The grammatical structures of European languages seduce their users into thinking that the divisions language erects between words or parts of speech inhere in the world itself, especially the division between subject and action. “But there is no such substratum,” Nietzsche replies; “there is no ‘being’ behind doing, effecting, becoming; ‘the doer’ is merely a fiction added to the deed—the deed is everything” (2010, 45). When it comes to texts, then, the performative effects of the words at the time in which they are read, rather than at the time in which they were written, carries more weight. Nietzsche’s constant refrains that his texts will not be understood by his contemporaries but only by readers in the far future, while typically taken in jest, provide philosophical support for the creative method of reading. When texts are introduced to social formations that did not produce them, new insights frequently emerge. I use the creative approach most explicitly in my readings of Marx and Whitman. Reading Marx’s reflections on machine production in an age of computers and the internet prompts new insights into his theories of value, while comparing Whitman to contemporary queer activists opens up new perspectives on his poems.

I apply this dual method not only to historical studies spanning several centuries (chapters one and four) but also to the close reading of single texts, *Capital* and *Leaves of Grass*, respectively (chapters two and three). This approach allows me to read and

discuss works not traditionally thought of as political theory—national income calculations, the poetry of Walt Whitman, and the cookbooks of Alice Waters—in addition to canonical texts in the history of political thought by Aristotle, Locke, Marx, Nietzsche, Arendt, and Foucault. The problematic of studying social formations broadens not only the concept of politics but also what texts count as political.

All four chapters, then, discuss historical understandings of the relevant activity in addition to exploring contemporary accounts and implications. For example, the first chapter shows how “the economy” did not exist as a concept before the 1930s by analyzing the alternative conceptual apparatuses that were used to represent the totality of material production. The second chapter contextualizes Marx’s later work by analyzing the influence of mid-nineteenth century physics, especially the growing field of thermodynamics, on Marx’s thought. Doing so reveals that Marx was a critic, not a supporter, of the classical labor theory of value. The third chapter resists treating Walt Whitman anachronistically as “a homosexual” and instead explores how the poet developed his own vocabulary and discourse for understanding the political implications of touching between members of the same sex. The fourth chapter distinguishes contemporary food movements that emphasize fresh and local food from two historically prominent dietetic discourses—humoralism and nutritionism—and challenges contemporary arguments that eco-dietetic movements are limited and neoliberal. I survey the different ways eating has been cast as political in each discourse, using Locke, Marx, and Nietzsche as illustrative examples.

## **A Brief Roadmap**

Each chapter explores a distinct sensory or bodily activity as a significant process in the maintenance and transformation of social formations. They are all instances of routine maintenance. The four activities I have chosen are not meant to be comprehensive, but they are sufficiently diverse to allow for some generalizations to be made.

The first chapter explores historical attempts to see the economy as a distinct, independent object. In particular, it examines three regimes of vision whereby something like the totality of national production was capable of being measured and represented as a unitary object. In the late seventeenth century, the English state developed a bureaucratic apparatus for observing and measuring, on a weekly basis, the quantities of certain staple commodities produced. The goal was to increase Excise tax revenue, but an important product of the surveillance scheme was the creation of a vast amount of information that could be compiled to calculate the “Balance of Trade” with France. By the nineteenth century, however, the classical political economists had successfully separated their discipline from the equally novel field of statistics and focused on the description of rational laws governing a new object they called “the market.” Contrary to contemporary economic dogma, none of the classical political economists—Smith, Ricardo, and Mill—ever used the phrase “the economy” to refer to an object in the world, nor were they interested in measuring what was produced in England each year. Until the beginning of the twentieth century, the word “economy” was primarily used in its classical, Aristotelian sense. No entity called “the economy” was thought or said to exist as a distinct object until the mid-1930s in the works of Simon Kuznets and John Maynard Keynes. Kuznets and Keynes, then, established a third regime of sight whereby the economy could be represented numerically, or more specifically, as an aggregate of

various statistical indices ranging from unemployment rates to GDP. My account of the emergence of the market and the economy as discursive objects depicts both of them as historical, politically-created and fragile, rather than as naturally occurring systems whose laws constrain any and all attempts to transform a social formation. Particular regimes for envisioning or imaging the totality of production actively determine what kind of economic activity will be accepted as rational and productive.

The second chapter continues to explore economic themes, but does so by analyzing the activity of working, more specifically, the differences between the labor of machines and the labor of humans in the works of Karl Marx. By first showing how Marx was a critic, rather than a supporter, of the classical labor theory of value, this chapter re-interprets Marx's claim that machines cannot create new value within capitalist social formations. Drawing on historical work documenting the influence of thermodynamics on Marx's thought, the chapter demonstrates that, for Marx, the peculiar ability of human labor-power to create value is the result of politics, not nature. This framing of the text reveals that for Marx the unique value-creating capacity of human labor within capitalist social formations, understood by Smith and Ricardo to be a natural endowment of the human species, is actually the product of a set of continuing, political processes that distribute capacities for agency differently among humans (labor), machines (physical capital), things (commodities), and forces of nature (electricity). By reading *Capital* as an investigation into the historical and political origins of humanity's value-creating capacity, rather than as a proof or exposition of the labor theory of value, I conclude that a distribution of agencies produced by politics (and not nature)—more specifically, a bourgeois regime for the sale and purchase of human labor-power—endows human

labor-power with a unique capacity. Political and legal institutions, not biology or reason or will, distinguish human labor from machine labor. My discussion of Marx contributes to and intervenes in two contemporary debates, the first about Marx's intellectual biography and achievements, the second about the prospects of overthrowing capitalism by means of completely automated production. Early socialists and contemporary technophiles alike have seen in machine production either the solution to the evils of capitalism or the path to an alternative economic system. My reading of Marx dissents from these views.

The third chapter discusses the politics of touching. Like the second chapter, it focuses on the work of a single author, one who happens to be a contemporary of Marx: Walt Whitman. Whitman's "Calamus" poems, I argue, cast comradeship—a distinct kind of friendship characterized by physical intimacy—as the foundation of a new social formation. Almost analogously to Aristotle, who holds that procreative marriage is the foundational and necessary human association, and that humans are political because they are endowed with speech, Whitman contends that comradeship represents an alternative and equally legitimate model of association and that touching, not just speaking, legislating, or voting, is a political activity. Whitman hoped that the spread of comradeship would overcome the divisions that lingered in America after the Civil War, maintained that comrades' novel way of life depends upon physical intimacy, and insisted that their regime of touch holds the key to establishing democracy. Whitman shows the importance of a particular regime of touching to the maintenance of any social formation. In our contemporary social formation, one touches hands with an acquaintance, hugs a family member, and kisses a single, intimate, sexual partner. Our legal codes both

enshrine and single out the institution of monogamous, permanent marriage. The conclusions of this chapter complicate a debate within contemporary queer theory. Recent work in the field has forcefully insisted that queerness is purely negative and loses its force to the extent that it affirms identity or a particular social order (Bersani 1995; Edelman 2004; Halberstam 2008). Whitman's queer comrades, however, are not anti-social in the slightest. They create, inhabit, and constantly reconstruct their own social and political community.

The fourth chapter explores the politics of eating by investigating the emergence of, and competition between, various dietetic discourses. It returns to the model of the first chapter and analyzes multiple discursive regimes for understanding and modifying a daily activity, but in this case eating rather than seeing. I argue that three historically distinct "discursive formations" have shaped the history of Western dietetics. Historians have already described two: a humoral regime associated with the Hippocratic and Galenic texts that structured European medical thought until the nineteenth century, and a nutritionist regime that crystallized in the nineteenth-century researches of Liebig and Atwater. I contend that a third discourse of 'eco-dietetics' emerged in the mid-twentieth century, in the form of fresh, local, organic and Slow Food movements. The contests between dietetic discourses center on competing conceptualizations of the body, health, morality, and authoritative knowledge. The contemporary food movements emphasizing fresh and local food are no different. As humoral dietetics did with humors and nutritionist dietetics with nutrients, eco-dietetics constitutes as its object of knowledge the effects of eating on the environment, or the links between "plate and planet." I situate these movements within the lengthy history of dietary advice in order to help rebut the

criticism that they have abandoned politics in favor of neoliberal, market-oriented activism. To the contrary, by creating new notions of the body, health, morality, and knowledge, eco-dietetics provides a potentially powerful site of resistance against neoliberalism. The claim that food movements have abandoned politics, I show, relies on the faulty premise that only state-oriented activism counts as authentic politics.

In the conclusion, I draw together the arguments of each chapter by discussing a surprising individual who figures prominently in most of the chapters—the German chemist Justus von Liebig.

## Chapter 1. Seeing “The Economy”

When Bill Clinton jested in his 1992 presidential campaign that “it’s the economy, stupid,” most who heard him presumably had no trouble understanding just what he meant. They would be stupid, after all, if they could not. But there is nothing self-evident about this elusive object, “*the* economy.” It is not only less than a century old but also impossible to perceive without the aid of abstract and partial measurements generated by vast, institutional, knowledge-producing networks. As this chapter will show, only under very specific conditions did it become possible to see and thus to speak about “the economy.” Over the course of the twentieth century, however, the novelty of both the phrase and the object was largely forgotten. This lack of historical sense has made possible the now common understanding of the economy as a naturally occurring, measurable, and representable object whose growth is necessary for the well being of a people and the legitimacy of a state. Yet instead of securing general prosperity, this representation of the economy has radically constrained contemporary politics—understood both conventionally, and in the broader sense this dissertation develops—by channeling its transformative energies and forces into new methods of production and consumption rather than new methods of belonging together.

Until the beginning of the twentieth century, the word “economy” was primarily used in its classical, Aristotelian sense, and until the beginning of the nineteenth century, with its classical spelling—*æconomy*.<sup>1</sup> Economy in this usage was the practice and skill of house-holding, somewhat analogous to the contemporary notions of business or

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<sup>1</sup> Starting in the mid-eighteenth century, the word acquired an additional meaning and began to refer to a condition of scarcity or strict equilibrium, first within the field of natural philosophy and then within political economy (Schabas 2005). Writers in the nineteenth century refer, for example, to an economy of labor or to an economy of scale.



management, and since Aristotle, economy fell under the domain of ethics. No entity called “the economy” was thought or said to exist as a distinct object in the world. Even the British political economists—including Smith in 1776, Ricardo in 1817, and J.S. Mill in 1848—did not use the expressions “an economy” or “the economy” to refer to their object of study, but instead spoke of “the market.”<sup>2</sup> Only in the early 1930s, largely as a consequence of the institutionalization of national income accounting in Britain and the United States, did it become common to say “the economy” and refer to an objective entity whose growth or lack thereof could be measured and estimated on a regular basis (Mitchell 1998, 2002; Tribe 2015). From that point on, one no longer learned economy, but how to observe, measure, represent, and participate in *the* economy.<sup>3</sup> Whereas the market was thought of as a system governed by rational laws, and about which merchants, financiers, or businesspeople have special knowledge, the economy was conceived as an object that can be governed and altered, albeit only partially, by the state’s responses to regularly published, quantitative estimations of its performance.

Political *œconomy*, when the phrase first appeared in the seventeenth century, was understood as the management of the royal household or of the metaphorical household of the nation as a whole; this usage was retained for nearly two centuries and can be found in both Rousseau and Adam Smith.<sup>4</sup> Beginning in the early nineteenth century,

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<sup>2</sup> Smith, for example, uses expressions like “managed with very good *œconomy*” and “with proper *œconomy*” (1904, V.1.62, 80); he does, however, speak of “market prices,” “market rates,” bringing goods “to market,” and “the market” *sans phrase*. Ricardo refers to “economy in the use of labour” (1821, 1.36), but never to an economy; he, like Smith, speaks of taking commodities “to market” and of “the market price” and insists, for example, that “wages should be left to the fair and free competition of the market” (1821, 5.34). Mill, in a parallel fashion, writes that “there is on the whole a great economy of labour” and notes that “increased economy” is possible (1909, I.6.1, I.5.21).

<sup>3</sup> Although for a few decades of the twentieth century “home economics” was taught in schools.

<sup>4</sup> Rousseau understands political economy as “the government of the large family which is the state” (1997, 3). Smith defines political *œconomy* as “as a branch of the science of a statesman or legislator” (Smith

political economists described their discipline as one which studied the laws governing an autonomous market system (Dumont 1977; Myrdal 1990; Schabas 2005; Tribe 1978).<sup>5</sup>

Whereas political *æconomy* sought to augment the wealth and prosperity of the sovereign, political economy sought to use sovereign power to ensure the working of an abstract market that was said to exist whether or not a sovereign political authority was there to constitute and manage it. Only at the turn of the twentieth century was the discipline renamed economics (Tribe 2015, 83).

In explaining these transformations and the emergence of this independent economic domain, two accounts have been predominant, one from Weber and his followers, the other from Foucault and his. After briefly summarizing these competing accounts, I will then discuss my own critical contribution to these literatures. Although I adopt the discursive approach developed by Foucault, the critical purchase of my argument relies on the claims made by Weber and Habermas.

For Weber, as I explained in the introduction, modernity in Europe heralded the differentiation of a previously unified society and worldview (*Weltanschauung*) into distinct value domains (1981c). Each domain or value sphere is associated with a different standard of value or type of rationality, and Weber associates the economic domain with instrumental rationality. In explaining the emergence of an independent economic value sphere, Weber primarily credits Calvinism and the Protestant work ethic (2001). Although the economic sphere is formally distinct for Weber, it is not completely

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1904, IV.I.1). Ricardo defined political economy as the science to “determine the laws which regulate” the distribution of wealth between various classes (1821, P.3).

<sup>5</sup> J.B Say, for example, emphasized a strict distinction between politics proper and political economy in 1803; he begins his *Treatise on Political Economy* by proclaiming that his contemporaries “have confused politics properly speaking, the science of government, with political economy, which shows how wealth is produced, distributed, and consumed” (1803, i, my translation). He insists, moreover, that “wealth is independent of the nature of government” (1803, ii, my translation).

autonomous insofar as it depends on the legal order and the latter's threats of coercion to function smoothly (Weber 1978, 329, 336). Weber sees the value spheres largely as equals—"warring gods" he calls them—but nevertheless suggests on occasion that the economic sphere is slowly gaining control or dominance over the others. His famous image of the "iron cage" implies that the economic order would inevitably assume a position of hegemony, unable to be surmounted or overcome.<sup>6</sup>

Two of Weber's prominent followers—Habermas and Polanyi—each develop this account, but unlike Weber they presume rather than merely speculate about the ascendance of the economic domain. In traditional societies, Habermas notes in his early work, the economic system "remained dependent on the supply of legitimation from the socio-cultural system" (1975, 21). In modern societies, by contrast, the situation is reversed. Political institutions, no longer sanctioned by traditional (i.e. religious) sources of authority, now rely on the economic sphere in order to legitimate themselves: "the now autonomous economic exchange relieves the political order of the pressures of legitimation.... The institution of the market can be founded on the justice inherent in the exchange of equivalents; and, for this reason, the bourgeois constitutional state finds its justification in the legitimate relations of production" (Habermas 1975, 22). Later, Habermas would refer to this process as the system colonization of the lifeworld (1985b). In Karl Polanyi's similarly Weberian description of modernity, "instead of economy being embedded in social relations, social relations are embedded in the economic

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<sup>6</sup> "The Puritan wanted to work in a calling; we are forced to do so. For when asceticism was carried out of monastic cells into everyday life, and began to dominate worldly morality, it did its part in building the tremendous cosmos of the modern economic order. This order is now bound to the technical and economic conditions of machine production which to-day determine the lives of all the individuals who are born into this mechanism, not only those directly concerned with economic acquisition, with irresistible force. Perhaps it will so determine them until the last ton of fossilized coal is burnt. In Baxter's view the care for external goods should only lie on the shoulders of the 'saint like a light cloak, which can be thrown aside at any moment.' But fate decreed that the cloak should become an iron cage" (Weber 2001, 123).

system” (2001, 60). Polanyi also assigns an aura of inevitability to this process, even while he describes resistances to the market system, noting that “once elaborate machines and plant were used for production in a commercial society, the idea of a self-regulating market system was bound to take shape” (2001, 43). For Weber’s students, then, the economic domain already assumes a hegemonic position in contemporary social formations.

Foucault discusses the independence of the economy during his studies of neoliberalism. His story focuses on the emergence of the concept of the population, which converted the analysis of wealth from the Aristotelian art of house-holding into “a new domain of knowledge, political economy” (2009, 77). Unfortunately, however, Foucault is not consistent in his usage of “economy” and “the economy.” For most of the lectures he uses “economy” understood in the Aristotelian sense. Once he even explicitly acknowledges the differences between eighteenth-century concepts and “what we now call ‘the economy’” (2009, 206). At least twice, however, he claims that the linguistic change happened in the eighteenth or nineteenth centuries.<sup>7</sup> Foucault’s early followers followed the latter route and placed the birth of “the economy” in the eighteenth century (Tribe 1981; Firth 1998; Rose 1999; Poovey 1998; Schabas 2005). In this they agree with other scholars, namely Joyce Appleby (1978) and Louis Dumont (1977), who independently reach similar conclusions about historical understandings of the

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<sup>7</sup> First, he claims that “the word ‘economy’ designated a form of government in the sixteenth century; in the eighteenth century, through a series of complex processes that are absolutely crucial for our history, it will designate a level of reality and a field of intervention for government” (2009, 95). And the next year he announces his intention to “talk about the application of the economic grid to a field which since the nineteenth century, and we can no doubt say already at the end of the eighteenth century, was defined in opposition to the economy” (2010, 240).

independence of the market in England but who do not comment on the novelty of “the economy” *per se*.

More recent scholarship by Foucauldian scholars, however, has resisted this tendency and stressed that the “the economy” did not emerge as a distinct phrase or concept until the 1930s (Mitchell 1998, 2002; Tribe 2015). Mitchell locates the emergence of “the economy” in the works of Keynes and in the field known as econometrics, both of which he describes as responses to the Great Depression (1998, 85–87, 2002, 5). He insists, moreover, that “the economy did not come about as a new name for the processes of exchange that economists had always studied” but was “an object that had not previously existed” before the twentieth century (2002, 5). Tribe concurs and claims that the idea of “a discrete domain of human activity dedicated to [economic] ends dates at most from the early nineteenth century, and in its current sense is much less than a century old” (2015, 23).

This chapter complicates the Weberian and Foucauldian stories about the constitution of “the economy” by distinguishing it from the constitution of “the market,” and before that, the “balance of trade.” Although Mitchell and Tribe are correct that “the economy” was itself a new object of knowledge in the twentieth century, efforts to measure the totality of national production were being proposed as early as the seventeenth century as part of projects to measure this “balance of trade.” Whereas the twentieth-century calculation of national income in order to represent “the economy” relied on statistical extrapolation and partial indices, these earlier efforts involved the physical measurement of production on a national scale. In between these two bookends, the eighteenth and nineteenth centuries witnessed not the birth of “the economy” but of

“the market.” Although the market was (thought to be) largely differentiated from the state, it was primarily understood in the nineteenth century as a system of rational laws, not as a discrete object which could be measured and represented quantitatively.

To sort out these two distinct transformations, I contrast three different ways the sum total of economic production has been seen, measured, and represented: as “the balance of trade” (seventeenth century), as “the market” (late eighteenth century onward), and as “the economy” (twentieth century onward). As Susan Buck-Morss notes, “because the economy is not found as an empirical object among other worldly things, in order for it to be ‘seen’ by the human perceptual apparatus it has to undergo a process, crucial for science, of representational mapping” (1995, 440). Each of these three objects of discourse, I argue, is “observed” very differently, and these different methods of observation engender very different representational maps. Each representation, in turn, resonates with and prefigures certain policy responses over others.<sup>8</sup> The balance of trade was observed and calculated with measurements taken on the ground by an extensive surveillance network of tax collectors whose accounts were then collected, centralized, and organized; the market was envisioned in the minds of political economists as the expression of rational laws; and the economy was seen in the pamphlets, pages, and data sets of economists as a set of numerical indicators generated by statistical techniques. This episodic history reveals that although “the economy” was a new concept in the

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<sup>8</sup> James Scott has made a similar, albeit more general, argument about the political connections between knowledge, sight, and legibility in his monograph *Seeing like a State*: “Certain forms of knowledge and control require a narrowing of vision. The great advantage of such tunnel vision is that it brings into sharp focus certain limited aspects of an otherwise far more complex and unwieldy reality. This very simplification, in turn, makes the phenomenon at the center of the field of vision more legible and hence more susceptible to careful measurement and calculation” (1998, 11).

twentieth century, it nonetheless occupied a discursive terrain that had been developed nearly three centuries prior.

My account of the emergence of the market and the economy depicts both of them as historical, politically-created and fragile objects, rather than as naturally occurring systems whose laws constrain any and all attempts to transform a social formation. One can find this latter account of the economic domain not just in Weber, but in Hayek and his colleagues as well.<sup>9</sup> Furthermore, the contemporary principle that the state should be concerned above all else with ensuring economic growth relies on this naturalized image of the economy that I historicize. As Bill Clinton's famous quip demonstrates, contemporary governments still rely on a growing economy in order to legitimate themselves. When the economy is thought of as a spontaneously generated, independent domain governed by its own immanent logic, however, the possibilities of political transformation are foreclosed prematurely. Rather than guiding markets, states are now said to themselves be subject to market logic. One prominent example of such constraint can be observed in the hesitant responses most nation-states have offered to the problem of climate change. Any large-scale action that could reverse or halt climate change is presumptively suspect because it would disrupt "the growth of the economy." This representation of the economy therefore performs a policing function, in the sense that Rancière ascribes to the term, by partitioning the sensible and determining what can be seen and what can be said. As I will discuss in the final section, contemporary measurements and representations of the national economy police a partition of the sensible in which some activities are seen, counted, and valued while others remain

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<sup>9</sup> Angus Burgin, however, has documented the "complex tensions confronted by market advocates in the postwar era" (2012, 9) and emphasized the distance that emerged between Hayek and Friedman in particular (2012, 11).

invisible and left out of the accounts.

My narrative therefore operates in two registers, one historical and one polemical. Speaking historically, I show how the economy was created by politics and is maintained by politics. Concurring with Unger that “history is vision, because history is also fighting” (2004a, xix), I want to expose polemically the ways in which concern for the economy has constrained contemporary politics. To live and work in the economy is to live politically, not naturally or freely, as liberals and neoliberals alike maintain. In other words, *homo economicus* is a subspecies of *homo politicus*, contrary to the claims of Wendy Brown I discussed earlier. Furthermore, this point echoes and takes up Kathi Weeks’ recent call to resist the “depoliticization of work” and thereby to treat working as a political activity (2011, 4). Discursive practices that both constitute and assume the existence of the economy—including but not limited to daily news accounts of the economy’s growth, constant refrains about the economy as the cause of an individual or a nation’s ills, and the daily act of performing work in order to help the economy run—are paradigmatic political acts that maintain a social formation obsessed with the performance of the national economy.

In what follows, I begin by describing the transformation in the English evaluation of commerce in the late seventeenth century. The next section details Charles Davenant’s late seventeenth century efforts to measure the totality of English production in order to calculate the balance of trade. In the third section, I discuss the efforts of the classical political economists to cordon off the market and discern the rational laws that govern it. Narrating the transition from the market to the economy, the next section focuses on the roles played by both colonial administrators and railroad corporations in



the US and Britain. Finally, I analyze the first depictions of the economy in the works of Keynes and his American contemporary Simon Kuznets. The conclusion considers the contemporary, twenty-first century means by which the fiction of the independent economy is maintained.

### **Merchants, Public Finance, and Commercial Virtue**

The slow legitimization and eventual glorification of commerce during the seventeenth and eighteenth centuries established the framework in which later attempts to observe and measure production on a national scale were worked out. More specifically, before the market system was said to be governed by natural and predictable laws, the world of commerce was thought to be characterized by turbulence and chaos (Dickson 1967; Pocock 1990). Commercial activities with profit as the primary goal, moreover, had long been deemed immoral by Christian authorities (Appleby 1978; Weber 2001). Only slowly, over the course of two centuries, did commerce for profit begin to appear virtuous rather than sinful in the European world. Whereas Weber emphasized the religious impetus of this transformation by connecting it to the rise of Protestantism and its worldly asceticism, I focus on its political character. In particular, the English, and later, British state's need for mercantile knowledge—and eventually for the vast sums of money the merchants and financiers had accumulated—set the stage for a radical reversal of the English evaluation of commerce.

Before this re-evaluation was complete, however, apologists for commerce spent a long time trying to legitimate their favored practices. Popular opinion in the seventeenth century was heavily against the new financial and commercial revolution. Joyce Appleby isolates three focuses of criticism in the period: “the grain trade, the conversion of

commonly held land to private property, and the lending of money for interest” (1978, 52). Peter Dickson singles out the common accusation that the growth of the national debt benefitted the powerful and moneyed interests rather than the common interest (Dickson 1967, 17; see also Hont 1990). The market for government securities that developed in London attracted particular attention (Dickson 1967, 22–23). And E.P. Thompson has argued that overcoming these criticisms involved juxtaposing a new, commercial logic against an older, embedded, moral logic (Thompson 1971).

One of the most important early technologies used by English merchants to establish their virtue and credibility, double-entry bookkeeping, came from the Dutch by way of the Venetians (Poovey 1998). Because of the commercial successes of the Dutch Republic, the English were anxious to adopt the tools needed to catch up (Appleby 1978; Dickson 1967). Mary Poovey has argued that the spread of double-entry bookkeeping to England helped enable merchants to appear truthful, virtuous, and important to their contemporaries; “as a *system of writing*, double-entry bookkeeping produced effects that exceeded transcription and calculation. One of its *social* effects was to proclaim the honesty of merchants as a group” (Poovey 1998, 30). As her account reveals, the method of accounting provided a way for merchants to display their credibility and prove their trustworthiness in the form of written accounts; if the balance was the same on both sides of the ledger, the merchant could demonstrate that any profit was legitimately earned.

Being able to point to socially validated, visible techniques also helped merchants claim access to special forms of knowledge. Examining the early seventeenth century debate between Misselden, Malynes, and Mun about the nature of money, Poovey explains that in the early seventeenth century “the most prominent innovation” was the

“argument that merchants possessed critical expertise about ‘trade’ and that only they knew how to read existing records so as to generalize knowledge about ‘commerce’” (1998, 67). These records—the product of a new emphasis on written, formalized accounting—helped to render “the general system of commerce visible.... In the face of such accounts, the prince will then be able to see the nation’s wealth, and with the help of the merchant experts, he will be able to evaluate and enhance the nation’s greatness” (1998, 78). The emphasis on vision is literal, for being able to see numbers on the ledger was important. Double-entry bookkeeping, and other systems of formal accounting, helped establish a precedent whereby numerical representation was used to visualize, represent and analyze systems of production.

In addition to establishing their moral credentials, merchants and financiers needed to demonstrate their political virtue within a social formation historically organized around landed wealth. According to J.G.A. Pocock, at the turn of the eighteenth century English/British

political thought became engrossed with the conscious recognition of change in the economic and social foundations of politics and the political personality.... These changes in perception came about through the development of a neo-Machiavellian, as well as neo-Harringtonian, style in the theory of political economy, in response to England’s emergence as Britain, a major commercial, military, and imperial power. (1975, 423)

In Pocock’s account, the theory of political economy was neo-Machiavellian because it sought to reconfigure the meaning of virtue, tying the latter to political outcomes rather than to classical ideals or morals. In the case of Britain, the political economists attempted to dissociate virtue from land and nobility and ground it instead in credit and wealth. Such was the core of the conflict between the country and court ideologies. As Pocock notes, “the rapidly developing style of political economy ... took shape around

the varying relationships which publicists were prepared to allow between land, trade, and credit as sources not merely of public wealth, but of political stability and virtue” (Pocock 1975, 426). But as the British state continued to borrow vast sums of money, its credit, rather than the wealth of the old aristocracy, was increasingly essential to the success of its projects, especially its wars (Brewer 1990). The money which the landed nobility would not provide was found elsewhere. Pocock shows that eighteenth-century “political economics marks the moment when the trader—and, still more pressingly, the financier—was challenged to prove that he could display civic virtue in the sense that the landed man could” (1975, 445). An appeal to supposedly stable and predictable laws of commerce, conceived as a semi-autonomous system, made it possible for political economists to connect virtue with the opportunities provided by commercial wealth. And by lending their newly acquired wealth to the state (at low rates of interest), the merchants and financiers, i.e. the bourgeoisie, could demonstrate their commitment to the nation and disprove the charges of the landed aristocracy that they sought merely to profit from the state’s wars.

Of particular importance in bringing about this reevaluation of commerce was the East India Company. Chartered in 1600, the Company was granted a monopoly on Indian trade, but for two and half centuries faced numerous obstacles in maintaining this monopoly. The Company’s continued existence and profitability therefore “depended upon demonstrating the autonomy of the world of commerce and its own pivotal role within it” (Ogborn 2007, 130). In order to trade at great distances effectively, Miles Ogborn has shown, the Company developed new accounting practices whose “aim was to ensure that London annually received a uniform, legible, and combined set of accounts

revealing the nature of the Indian trade” (Ogborn 2007, 86). The company eventually waged a public campaign in order to defend both foreign trade and its continued role within it (Ogborn 2007, chap. 4). The regular publication of its stock value by the end of the seventeenth century, moreover, “made possible a reliable depiction, for subscribers anywhere in the country, of the standing of markets in other places and, over time, their rise or fall” (Ogborn 2007, 188). Lastly, the vast sums of money the Company and its stockholders accumulated became particularly important sources of loans to the state. Ogborn notes that the Company and other joint-stock companies like it were “the greatest source of loans to the state before 1720” (2007, 166).

The primary institutions for making England’s commercial wealth available to the state were created in the last decade of the seventeenth century: the Bank of England, the National Debt, a market for public securities, and a system of long-term credit enabling the state to borrow large sums of money to supplement its tax revenue. This credit system included selling of annuities, public lotteries, and stock in government chartered corporations such as the East India and South Sea Companies (Braddick 1996; Brewer 1990; Dickson 1967; Roseveare 1969). By the time the English financial system had been established, the French and the Dutch had already implemented long-term borrowing schemes, and the English were anxious to catch up (Appleby 1978; Dickson 1967). As Pocock notes, “in what has been called the ‘financial revolution’ that began in the nineties, means were found of associating the national prosperity directly with the stability of the regime, the expanding activities of government and—most significantly of these—the prosecution of war” (1975, 425; see also Poovey 1998, 151). The new system of public credit “enabled England to spend on war out of all proportion to its tax revenue”

(Dickson 1967, 9). Managing the public debt was thus a constant concern for eighteenth-century British politicians, especially Walpole and Pitt. Qualified mass participation in the new financial revolution, however, helped institutionalize the linkages between the state's ability to wage wars and its reliance on commercial wealth. The state benefited from its access to new sums of money, and those with money benefited from "a whole range of securities in which mercantile and financial houses could safely invest, and from which they could easily disinvest" (Dickson 1967, 11). The money accumulating in London could now be safely put to use. The credit system created a feedback loop between the financing of the state, the waging of war, and the generation of new wealth for those who lent that money to the state.

In his influential study of this transformation, A.O. Hirschman emphasizes the emergence of a discourse of the interests that replaced a discourse of the passions. Over the course of the eighteenth century, he notes, a new solution to the various problems introduced by human passions was found in the promotion and control of certain interests; it "took the form of opposing the *interests* of men to their *passions* and of contrasting the favorable effects that follow when men are guided by their interests to the calamitous state of affairs that prevails when men give free rein to their passions" (A. O. Hirschman 1977, 32). In Mandeville's famous *Fable of the Bees*, individual, private vices ironically produced public virtue; and for Montesquieu, the spread of commerce calmed and gentled the violent human passions while promoting social and civilized interests. The success of this discourse of interests, however, was both partially due to, and intimately linked with, the political re-evaluation of commerce that preceded it. The proto-psychology whose development Hirschman traces owed its ultimate success not to

its superior logic or core of rationality, but to the larger political changes in the British social formation. He focuses on the political philosophers but in so doing glosses over the thought of political actors.

Before there was a market system or an economy to study, there was simply commerce in its sundry manifestations of agriculture, trade, manufacture, etc. Until these activities were deemed legitimate, moral, and virtuous, they were not examined as objects governed by any sort of law. The pre-history of the economy, then, begins with the neo-Machiavellian re-evaluation of commerce that closed the seventeenth century and inaugurated the British empire.

### **The Excise, Political Arithmetic, and the Visibility of Production**

During the same period in which the English system of public credit was developed, the other means of revenue collection—especially the Excise tax—were also expanded. The Excise was levied on certain staple goods at the point of production and paid by the producer. The success of the Excise, moreover, required a vast system for both observing and standardizing the production of staple commodities in England (Ashworth 2003; Brewer 1990; Ogborn 1998). The kinds of records gathered by the Excise office, along with other revenue departments like the Customs and the Treasury, helped to constitute a visible domain of production and exchange that could later be re-imagined as a market system.

After the Restoration, the Stuarts abandoned the traditional practice of tax farming, in which private individuals purchased the rights from the king to collect taxes and were entitled to keep a portion for themselves, in favor of the direct collection of taxes by state agents (Ashworth 2003; Brewer 1990; Roseveare 1969). This switch

ensured that the crown had a steadier flow of income but required the development of a much larger bureaucracy for revenue collection. The new source of regular income, importantly, could be used as promised collateral for larger and larger public debts.

The most significant change in the tax system, however, was the growth of the Excise administration. John Brewer notes that “Excises became the largest category of taxes, employing the biggest body of officials, and the Excise Office a byword for administrative efficiency” (1990, 67–68). In fact, “the customs and excise taxes, the chief source of ‘ordinary’ royal income before the Glorious Revolution, continued to provide almost all indirect tax revenue for most of the eighteenth century” (Brewer 1990, 95). Charles Davenant, commissioner of the Excise during the 1680s and largely responsible for the reorganization and growth of the office, explicitly acknowledged the function of the new taxes and affirmed in 1695 that “excises seem the most proper Ways and Means to support the government in a long war” (1771a [1695], 62).

The Excise administration, moreover, was perhaps the first institution to see a system of production governed by predictable or natural laws. As William Ashworth notes, “not only did the excise officer have knowledge of the mysteries of trade and production, but he was also a key component in defining and making them visible” (Ashworth 2003, 211). Davenant, for example, professed not only that “the excise, and number of houses and hearths, are no ill measures to form a judgment by, of the trade, wealth, and abilities of a country” (1771a [1695], 40) but also that “the excise is a measure by which we may judge, not only of what the people consume, but, in some sort, it lets us into a knowledge how their numbers increase or diminish” (1771b [1698], 136). The figures produced by the excise, Davenant claimed, generated new kinds of



knowledge about production, trade, consumption, and the population. He notes that before 1674, the excise farmers did not have to hand over their accounts, and thus such knowledge was unavailable to the crown. Davenant clearly saw the epistemological implications of his new Excise administration; it generated the knowledge necessary to assess and evaluate the size and wealth of a population.<sup>10</sup>

To make the system of production in England visible, measurable, and therefore taxable, the Excise Office undertook a massive campaign to record and categorize the economic activities of the nation. The Excise commissioners walked the English countryside and assessed the tax on producers of the relevant commodities: “the Excise was a highly centralized system of revenue collection.... The officers who gauged excisable commodities in the countryside—beer, malt, hops, salt, candles, and leather—numbered between 1000 in 1690 and some 2800 in 1780” (Brewer 1990, 102). Miles Ogborn reports that

Davenant’s circuits—and the work he performed through them—constructed, adjusted and carefully maintained a network of people (gaugers, supervisors, collectors, magistrates, brewers), instruments (seal measures, casks, tuns, the semicircular rule), and documents (running stock books, brewers’ ledgers, scribbled calculations, legal decisions, and his own diaries). (1998, 305)

The Excise Office created schemes for observing a vast chunk of the nascent English system of commodity production. To represent this system, however, the Excise officers first attempted to see it on the ground, so to speak, and thus they went on their daily and weekly rides. Davenant was therefore dismayed that “as to the excise, all who know that

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<sup>10</sup> Foucault has demonstrated that the emergence of the concept of population enabled the discipline of political *æconomy* to abandon the study of the household as the unit of production. As Foucault writes, “the perspective of population, the reality of phenomena specific to population, makes it possible to eliminate the model of the family and to re-focus the notion of economy on something else” (Foucault 2009, 104). Defining this something else, however, became the central occupation of the first theorists of political *æconomy*. Further aiding this transformation was the general disregard for Aristotelianism promoted by the Royal Society (Poovey 1998, 110). The rejection of teleology opened up new possibilities for the activities long confined to the domain of ethics.

revenue must grant that, in the north and west, the country in many parts is so wild, and the houses lie so dispersed, that the retailers cannot be so well watched as in the home counties” (1771a [1695], 45). Direct, physical observation of the entirety of the nation’s economic activity was the goal of Davenant’s project. The expansion of the Excise, however, met with considerable resistance from producers who attempted to escape the gaze of the officers and from the general population upset with price increases (Ashworth 2003; Thompson 1971). Almost a century later, a market system could appear to the political economists only because of this vast, institutional, data-gathering mission which for Davenant was intended to raise revenue efficiently, not to describe a system governed by natural laws. The supposed discovery of those laws was almost a by-product of Davenant’s efforts; he did not set to create or to find an economy.

The excise officers surveyed and made visible the activities of the various producers who were taxed, and their supervisors surveyed and made visible the work of the riding officers. Consequently, “in recasting trust and objectivity in this way, the excise pursued a rigorous method of reflexive endeavor and practice. The whole process involved in the production of a taxed good had to be visible to the excise officer, while the excise officer’s own activities and method had to be visible to his watchful superiors, and indeed to the manufacturer” (Ashworth 2003, 118). As a result of the various operations of the Excise designed to render visible the production in the English territory, “the phantasms of a commercial world in motion characterized by trade, mobile property, and credit could be mapped (bookkeeping) and thus ostensibly grounded in fact—or at least a language that sounded like fact” (Ashworth 2003, 90). In short, it was the appearance of regularity in the Excise that helped convince the English state that the

world of commerce was governed by laws rather than the whims of fortune.

The Excise, moreover, did more than make visible the English system of production; the need for such visibility also helped to standardize the instruments and processes for producing excised commodities. In more general terms, “the excise, especially, was instrumental in defining the method, materials, and architecture of production” (Ashworth 2003, 6). The success of the Excise in collecting the tax efficiently “ultimately required an attempt to regulate its qualities and for the site of production to be reconfigured to meet the excise’s process of measurement” (Ashworth 2003, 6). In order to open a brewery, for example, the prospective brewer had to give notice to the local Excise officer who had to approve the brewery’s design, lest brewers hide pipes in the floor in order to siphon off beer before it could be gauged by the officer (Ashworth 2003, 212; Ogborn 1998). The containers used for brewing, moreover, were standardized so that the Excise officers’ gauging instruments could measure accurately. The excise taxes thus helped constitute a market system in a second sense. They not only made the domain of production visible, but also *made that domain into a system* by standardizing the common methods of production.

Davenant, importantly, understood his project of measuring and estimating domestic production as an example of what was known at the time as Political Arithmetic, named such by its inventor William Petty. Simply put, political arithmetic was a method designed to measure and then alter a population. Petty developed it from the 1650s through the 1680s in the form of two published treatises and numerous privately circulated pamphlets (McCormick 2009). Petty’s particular goal was to estimate the size of the Irish and English populations in order to “transmute” the Irish into English

by means of a specific number of intermarriages (McCormick 2009, 10, 305). In order to explain how this transmutation would be accomplished, Petty relied on the survey of Ireland he conducted for Oliver Cromwell and the statistical techniques he developed with his colleague John Graunt; political arithmetic was consequently associated with the development of mathematics and other forms of numerical representation (McCormick 2009, 291). Petty's disciples, Davenant included, effected "a real change in the meaning of political arithmetic: once explicitly an art of government, it was now, its practitioners stressed, an art of reasoning" (McCormick 2009, 298). Whereas Petty thought of political arithmetic as an art to be used by the sovereign and circulated his ideas primarily as pamphlets distributed privately to political elites, his disciples sought to expand its reach considerably.

Davenant played an important role, for he "worked to reinvent political arithmetic as a putatively apolitical tool of quantitative analysis suitable for an expanding fiscal-military bureaucracy (of which he was himself an agent) and available, via the printing press, for use in parliamentary and public debate" (McCormick 2009, 299; see also Ogborn 1998, 293; Buck 1982). Davenant, as previously mentioned, endorsed the use of political arithmetic to help Britain finance its continental wars after the Glorious Revolution. For Davenant, restoring England's financial situation required restoring its "Balance of Trade" so that wealth would again flow into the country. Advancing the art of political arithmetic required knowledge of what was produced in "every county and place" and in addition which commodities were imported and which exported (1771a [1695], 40). By means of this knowledge, Davenant claims, it would be possible to understand the workings of a country's commerce, but more importantly, the systematic

nature of that commerce: “this art alone can shew the links and chains by which one business hangs upon another, and the dependence which all our various dealings have upon the other” (1771b [1698], 147). The links and chains Davenant mentions span the entire domain of commercial activity. Davenant therefore emphasizes that the computations he wishes to perform would require one to have knowledge about the “wealth, stock, product, consumption, shipping, exportations and importations of his country” (1771b [1698], 147). Davenant lists together the activities that later theorists would unify as “the market” or “the economy” and even remarks on their interdependence, but he does not cordon them off as a distinct, autonomous, or independent domain. He refers to them merely as “all our various dealings.”

The data collected by the Excise quickly became important to the rest of the government: “the steady flow of information meant that the excise commissioners could deal quickly and effectively with inquiries from other branches of government. When the Treasury wanted statistics on candlemakers or the War Office figures on the number of innkeepers who might be pressed into billeting, the Excise could provide the requisite data promptly” (Brewer 1990, 112). The Excise was aided in data collection when the Office of the Inspector-General of Imports and Exports was created in 1696 (Brewer 1990; Poovey 1998). Davenant was so faithful in the knowledge produced by the Excise that he claimed “the books of hearth-money, and the late polls, have likewise given us such an insight into the number of people, and the abilities of the respective families, that it would not be difficult to make some computation, what the excise upon any commodity would produce” (1771a [1695], 69). The consolidation of this knowledge was aided by newly established supremacy of the Treasury. In the 1680s, the Treasury successfully

monopolized authority over public finances and “as the Treasury gained control over spending, so it acquired a monopoly of comprehensive fiscal knowledge” (Brewer 1990, 92; see also Roseveare 1969). The centralization of knowledge about finance—and later domestic production—helped make visible to specific individuals an aggregate of activities that had begun to look more alike than different. The clerks of the Treasury became gatekeepers of economic knowledge.

Petty and Davenant, then, campaigned for and defended the collection of the kinds of records that would make the newly invented concept of the population visible to certain experts, just as double-entry bookkeeping and other forms of accounting made the world of commerce visible to merchants and financiers. The Excise relied on a system of direct, standardized observation, although as the records were passed up the bureaucratic chain, the system of production was represented more and more abstractly. This mode of representation is in contrast to what will come next; rather than attempting to see the totality of the market system in the flesh and measure its size, political economists will work with supposedly rational abstractions from step one.

### **Classical Political Economy and the Constitution of The Market**

The histories of economics that do not begin with Adam Smith tend to trace the discipline’s origins either to Petty’s Political Arithmetic or to Francois Quesnay’s Physiocracy (Myrdal 1990; Dumont 1977; A. O. Hirschman 1977; Buck-Morss 1995; Foucault 2009, 2010; Harcourt 2011). Quesnay’s famous *Tableau Economique* depicted in 1758 what is often treated as the first representation of an economic system. As the previous section has demonstrated, however, the notion that commerce is ordered and systematic was prominent in the late seventeenth century, well before Quesnay. Two

other recent studies, in particular, support this claim. Margaret Schabas points to natural philosophy and its concept of the *œconomy* of nature as an inspiration for the classical political economists' idea of a market system (2005). Mary Poovey, however, argues that experimental moral philosophy, rather than political arithmetic or physiocracy, was the direct source of Smith's concept of the market system (1998). When the concept of the market was finally enshrined as the central abstraction of the discourse of political economy, it was visualized and represented as a system governed by rational, inexorable laws. Discovering and articulating these laws took precedence over measuring and accounting. The classical political economists therefore established a rigid distinction between their discipline and statistics. They discovered and created not "the economy" but rather "the market." I will begin with the accounts of Schabas and Poovey before turning to the classical political economists directly.

Schabas argues that the natural philosophers, beginning with Linnaeus, developed the first idea of an economic system with their concept of an "œconomy of nature." "Until the mid-nineteenth century," she notes, "economic theorists regarded the phenomena of their discourse as part of the same natural world studied by natural philosophers. Not only were economic phenomena understood mostly by drawing analogies to natural phenomena, but they were also viewed as contiguous with physical nature" (2005, 2). To support her argument, Schabas points out that "many of the contributors to political economy in the period were also engaged in natural philosophy. Some of the names that stand out are William Petty, John Locke, Carl Linnaeus, Adam Smith, Thomas Reid, François Quesnay, Antoine Lavoisier, and A. R. J. Turgot" (Schabas 2005, 6). Natural philosophy, the antecedent to mechanical philosophy, sought

to uncover and discern the nature of things, i.e. their Aristotelian *telos*. The most important natural philosopher in Schabas' account is Linnaeus, who not only worked as a biologist but was also instrumental in establishing the disciplines of political economy and cameralism in Sweden (Schabas 2005, 40). Schabas demonstrates, furthermore, that Quesnay conceived of his economic system both as part of nature and governed by the same laws that governed everything else (Schabas 2005; see also Polanyi 2001, 141–142). In other words, this system was not autonomous and independent; it was ordered, but only because it was part of a larger universe defined by order. Quesnay thus analogizes the economic system to the human body, understanding both as organic bodies rather than abstract systems.

For Schabas, Linnaeus' "popular tract *Oeconomia Naturae* (1749)" provides "the first picture of an economy, that is, of a complex set of relations sewn together by supply and demand, with substitutability and mobility of resources" (2005, 29, 30). According to Schabas, as long as the economy was understood to be a part of nature, it was neither autonomous nor governed by its own set of laws. She thus credits J.S. Mill rather than Adam Smith with the "de-naturalization" of the economy insofar as the former emphasizes the human and social origins of the market. I contend, however, that Schabas errs in describing this idea as the first picture of an economy. Even though the word *oeconomia* is used, it denotes a state or system of scarcity, not an index or representation of the totality of economic activity of the sort that Davenant and, later, Keynes, desired. An economy conceived as a harmoniously balanced system is not the same as "the economy" conceived as a unitary entity capable of growth, as the next sections will explain.



Poovey, however, has argued that eighteenth-century experimental moral philosophy, “*not* political arithmetic, was the disciplinary antecedent to political economy” (1998, 19). It was moral philosophy, she insists, that provided the crucial notion of an abstract system that organizes the world behind the scenes. Experimental moral philosophy, developed during the eighteenth-century Scottish Enlightenment by figures such as Francis Hutcheson and David Hume, was concerned with discovering the universal principles of human subjectivity as well as “the origins of modern society and especially how ‘rude’ societies became ‘civilized’” (Poovey 1998, 215). Because this history of the transition from savagery to civilization had to be constructed without physical observation of the event described, “the Scottish historians used the experimentalist’s assumptions that some system organizes the phenomenal world and that human nature is universal to ‘conjecture’ what they could not document” (Poovey 1998, 215). Where physical observation was impossible, imagined observation had to suffice. These assumptions were necessary to solve the problem of induction from observed particulars that Hume had revealed; the assumed system governing the world therefore ensured that future events would resemble past ones. This process of conjecture and abstraction was expanded and as a result “abstractions like ‘the human mind’ were *produced by the method of conjectural history itself* in order to make something that exceeded any individual incarnation available to intellectual contemplation” (Poovey 1998, 224). Poovey maintains that Smith’s concept of a market system was inspired by Hutcheson and Hume’s conjectural abstractions, rather than Petty’s population measurements, Linnaeus’ *Oeconomia*, or Quesnay’s *Tableau*.

Schabas and Poovey demonstrate, then, that numerous discourses during the eighteenth century relied upon and proffered strong concepts of ordered systems in order to explain the world around them. Whether in natural or moral philosophy, eighteenth-century thinkers insisted that their objects of study could be understood as abstract systems governed by rational laws. The break that Smith, Ricardo, and Mill would collectively accomplish thus stemmed from their attempt to describe the laws of ordered markets as different from the laws governing other natural domains. The market would become not just ordered, but independent and autonomous.

The word of choice for the classical political economists in describing their object of study was “the market.” They wrote about the importance of the market price, of the means by which goods went to market, of the markets in labor, grain, and other commodities, and even about the market *sans phrase*. The word market initially referred to legally delimited spaces for commercial exchange, but by the sixteenth century the meaning expanded to encompass an abstract space or process constituted wherever exchange was possible (Agnew 1988, 41). The new meaning of the word, moreover, was linked with the erosion of feudal restrictions on the places where commercial exchange could occur (Agnew 1988, chap. 1).

In the texts of the political economists, the word still ambiguously refers both to places and processes, but there is a heavy presumption favoring the latter meaning. Smith notes, for example, “as it is the power of exchanging that gives occasion to the division of labour, so the extent of this division must always be limited by the extent of that power, or, in other words, by the extent of the market. When the market is very small...” (1904, I.3.1). Smith equates “the market” with “the power of exchanging,” but nonetheless refers

to it in spatial terms with adjectives like “limited” and “small.” In another telling instance, Smith writes that “fluctuations affect both the value and the rate either of wages or of profit, according as the market happens to be either over-stocked or under-stocked with commodities or with labour” (1904, I.7.19). Here the market refers to the sum total of commodities that can be exchanged, labor included. Occasionally, he refers to the market of a specific country. But in each case he refers to the market as an abstract entity that is nonetheless spatially bounded, materially or metaphorically.

According to the political economists, the market grows by means of geographical or physical expansion, through either foreign or colonial trade, and by means of sustained capital accumulation. Ricardo therefore writes of “the extension of the market” in his chapter on foreign trade and states in his chapter on taxes that “when the annual productions of a country more than replace its annual consumption, it is said to increase its capital” (1821, 7.6, 8.2). J.S. Mill notes, similarly, that societies which experience progress “increase gradually in production and in population” (1909, IV.1.2). Neither writer seems interested, however, in calculating precisely just how production is growing. Commenting on the lack of “composite indices routinely published and circulated in the public or industry press,” Poovey argues that “it was not possible in the early nineteenth century to mistake a particular index or average for the market as a whole ... nor was it possible even to conceptualize ‘the market’ as a unified and animated social agent” (2001, 406). For the nineteenth-century political economists, a market can grow and develop, remain stationary, or shrink and devolve, but no institutional effort attempted to measure that movement as whole.

The political economists claimed to know and represent the market by describing the laws regulating it. The emphasis on discovering these laws united the projects of Smith, Ricardo, and Mill. All three stressed the rational, largely *a priori*, description of the laws which govern the system of market exchanges. In other words, the political economists abandoned the aims of political arithmetic and political economy as both were understood in the early eighteenth century. Petty and Davenant sought the collection of records for production and trade and stressed that only through the study of such records could knowledge be produced about commerce. Smith, however, professed to “have no great faith in political arithmetic” (1904, IV.5.69). In the early nineteenth century, the influential popularizer of Smith and Ricardo, J.R. McCulloch insisted on the separation of political economy and statistics (Poovey 1998, 305; Kalpagam 2014, 139). J.S. Mill was perhaps the most emphatic. He characterized political economy “as essentially an *abstract* science, and its method as the method *à priori*. Such is undoubtedly its character as it has been understood and taught by all its most distinguished teachers. It reasons, and, as we contend, must necessarily reason, from assumptions, not from facts” (Mill 1874, V.46). The political economists, like the political arithmeticians, used numbers and were no strangers to mathematics, but unlike the latter they were not interested a numerical representation of the market as a whole but of the rules which govern that market.

The forms of vision on which they relied, then, were above all else abstract in character. They saw the market at work by imagining its pure, ideal, and rational form. Although the market of which they spoke could supposedly be experienced in the flesh, it could never be seen in such a fashion. It could only be observed imaginatively and ideally

through abstract reasoning from established or supposedly self-evident premises. This vision of the market, then, did not produce institutional efforts to represent the state of the economy. Rather, it promoted the now connected doctrines of “free trade” and “free markets.”

### **From the Market to the Economy: Colonies and Railroads**

The transition from speaking of the market to speaking of the economy did not conclude until the decades after World War I when the Western nations institutionalized systems of national income accounting, but it began in the mid-nineteenth century primarily because of two factors: colonies and railroads (and, of course, colonial railroads). Both of these large-scale projects involved not only the mapping and transformation of vast amounts of space but also the development of accounting practices that were necessary for representing and managing increasingly large and complex commercial exchanges. The protagonists of this story, however, are not rationality, logic and grand market forces, but more humble materials: iron and steel tracks, wires, clocks, and accounting books. Humans figure prominently, but primarily as record-keepers and manual laborers.

I will start with colonies and continue with the railroads. Colonial administrators helped make an economic domain visible in their efforts to document and represent colonial trade for their superiors in the metropole. For Mitchell, “twentieth-century economics also has a colonial genealogy” (2002, 7). Not just economics, but “the realization of the economy belongs to the history of colonialism” (Mitchell 2002, 83), and in particular, the history of British colonialism in Egypt. In her study of British India, Kalpagam concurs and maintains that “colonial governmentality as a knowledge-producing activity generated numbers, classifications, and measurements in vast

quantities in the nineteenth century” (2014, 140). As important as the numbers themselves, however, was the manner in which they were presented and conveyed back to England. As I mentioned in an earlier section, the East India Company began sending yearly reports to company administrators from the time of its founding in 1600. Beginning in 1817, however, the “Colonial Office in London required the colonies to produce an annual statistical and informational Blue Book” (Kalpagam 2014, 61). The government agents in addition to the company managers wished to see the reports. These Blue Books were intended to keep politicians informed of the goings-on in each colony, but they were often incomplete and arrived back in London years after they were first dispatched. Nonetheless, the Blue Book “was by 1840 the most extensive, regular, and standardized imperial inquiry conducted annually of the colonies and territories of the empire” (Kalpagam 2014, 61). By the 1860s, yearly reports and balance sheets were required of all joint-stock companies in Britain (Kalpagam 2014, 153). While the political economists were imagining a perfect market, in the Colonial and India Offices their contemporaries were establishing a precedent and expectation for the regular publication of aggregated, quantitative information about commerce.

Equally important in this transformation were the railroads, which began to develop in both the United States and Britain just after 1830. The railroad companies helped establish the abstract space in which the national economy came to exist.<sup>11</sup> In both countries, the extent of the rail networks established the boundaries and limits of the national market. In the US, this massive expansion required not just material, but massive amounts of human labor, most of which was performed by recent immigrants or by slaves. Where the lines were extended, the bounds of national economy followed. Thus

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<sup>11</sup> For a discussion of the “material” impacts of railroads see Schley (2013), especially note 2.

Richard White's important revision to the standard, triumphant accounts of the railways: "railroads, so the cliché goes, annihilated space and time, and they obviously did cut the time and cost of travel. They made the far near. But they did so unevenly and chaotically" (2012, xxix). The expansion of Western rail lines out of Chicago—and only Chicago—prefigured and made possible the rapid Westward expansion of the nineteenth century (Cronon 1991). Towns connected to the growing rail network had access to Eastern markets for the first time, allowing farmers both to sell their crops and to buy other commodities in return (Cronon 1991).

In Britain, the regionalization of production was supported by the regional near-monopolies of the largest railroad companies, each reflected in its name: the Great Western, the Great Eastern, the London and North Western, the Midlands, the London and North Eastern, etc. (Freeman 1999, 155). It seems more than coincidence but less than fate that British railways were nationalized only a few years before Keynes ramped up his efforts to measure the British economy. Finally, in India, "the trains themselves were to represent the creation of a new collective identity that would cut across ethnic, religious, linguistic, and cultural differences" (Aguiar 2011, 9). The trains furthered the British purpose of uniting the extraordinarily diverse peoples of the region into the unified India.

The railroads, moreover, did not merely establish the abstract space of the national economy, but its abstract time as well. It was the railroads that ended the era of local times determined by the sun and established the hegemony of standardized time zones (Cronon 1991, 79; Freeman 1999, 46; R. White 2012, 160). Much as newspapers helped establish a sense of national togetherness among those who read the same

headlines on the same days (Anderson 1991), living on the same time helped establish the notion that all of the production in a nation occurred simultaneously and on the same clock. The railroads further altered the experience of time in cooperation with invention of the telegraph (Freeman 1999, 59; Joyce 2013, 9); train tracks and telegraph wires developed “in tandem, often following the same routes, and together they shrank the whole perceptual universe of North America” (Cronon 1991, 76). By enabling nearly instantaneous communication across large distances, the wires enabled geographically distant actors to learn about and react to events anywhere on earth without delay. The railroads helped create the abstract space, and the telegraph wires the abstract time, of the national economy.

Furthermore, the railroads helped to compile and distribute statistical information of the sort that governments would collect in the early twentieth century. For Alfred Chandler, the railroads “contributed substantially to the emergence of accounting out of bookkeeping” (1977, 109) and “by 1860 the railroads probably employed more accountants and auditors than the federal or any state government” (1977, 110). William Cronon notes, similarly, that “the railroads faced as much of a challenge in processing data as in moving people or freight” (Cronon 1991, 81). White concurs and argues that the railroad companies were instrumental in developing “one of the nineteenth century’s great fictional genres: the annual stockholder’s report” (2012, 69). Like double-entry bookkeeping, and as with the reports prepared by the East India Company, these annual documents were designed more to prove and substantiate the virtue—i.e. profitability—of the railroad companies, than to represent accurately the company’s accounts. One significant mechanism for advancing this agenda has become known as capital



accounting, or separating capital from revenue accounts (Chandler 1977, 111). In short, by classifying the massive debts accrued to construct the rails as capital rather than revenue expenses, this technique allowed the corporations to claim that they made an annual profit even with large debt (Chandler 1977, 111).<sup>12</sup>

White has recently challenged Chandler's narrative of the triumph of organizational rationality by emphasizing the drastic failures of most railroad companies. More importantly for my purposes, however, he claims that "substituting time for distance made space political, but only to the extent that politics determined which places got railroads and which did not" (2012, 141). White further argues that the railroads brought about not the annihilation of space by time, but the annihilation of space by *cost*; "measuring space by cost rendered it radically unstable. It changed every time a freight rate changed" (2012, 141). This instability of space was magnified by the sheer complexity of setting rates. The vast majority of the time, White notes, "even the railroads had very little knowledge of their true costs and thus the profit on any particular item" (2012, 160). Behind the creation of a national market in the United States, then, it is difficult to find the logic of the mysterious and magical powers often bestowed on so-called "market forces."

The intersection of the needs of a vast empire and the revolution in communication enabled by railways, and by extension, the telegraph, produced another important institution for constituting a national economy: a post office. The newly

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<sup>12</sup> A very simplified version of capital accounting would work like this: say a company raised and spent one million dollars to construct a railroad via bonds, but that year it also spent one hundred thousand dollars on all its other costs and earned two hundred thousand dollars in ticket revenues. If the company has just one account, it looks as if it has a net loss of nine hundred thousand dollars (1.1 million in debits, .2 in credits). By classifying the investment in construction as "capital"—as something which is supposed to return its value (and hopefully more) to the company over a long time frame—and separating the capital account from the revenue account, the company makes it appear as if it made an annual profit of one hundred thousand.

acquired speed, efficiency, and regularity of the mail depended on the speed, efficiency, and regularity of the railroads transporting that mail. Patrick Joyce has further argued that the “idea and in considerable measure the material achievement of the Post Office was that it would create subjects capable of relating to others they had never met, so engaging in action at a distance with others, action both economic and social” (2013, 102). Over the course of the nineteenth century, the British Post Office introduced the Penny Post, allowing for mail to be sent cheaply anywhere on the island; the Money Order and the Postal Order, enabling the speedy transfer of small sums of money; the Parcel Post, which “completely transformed the possibilities for commercial postage, especially in the shape of the mail-order business”; and the Post Office Savings Bank, which brought a significant number of otherwise resistant Britons into the credit system (Joyce 2013, 115–117). In addition, the Post Office created and published maps that depicted the flow of the mail within Ireland and England, and these maps “made it possible to envisage the character of the whole network at a glance, as a system in fact, enabling rapid calculations and increasingly sophisticated understandings of the network’s operations” (Joyce 2013, 127). These maps depicting the density of postal flows represented the workings of the British market, but required, like Davenant’s Excise calculations, a vast material network of observation. Davenant, however, mapped the workings of an already existing commercial world, whereas the Post Office mapped flows that its existence made possible.

In short, the railroads—along with the empires, corporations, and communication networks that were reliant on them to operate—established the foundations for the emergence of the economy as a new discursive object. The many markets within a

national territory could become a single economy once they were understood to exist in the same space and in the same time, but this understanding required the famous “annihilation of space by time” that the railways achieved. The markets of New York-Chicago-California, or London-Birmingham-Manchester, could become single markets in the minds of producers and consumers only when the ease, speed, and cost of distribution made the location of production largely irrelevant. Although the conditions were in place for the emergence of the economy by the end of the nineteenth century, the actual process was not finished until it was necessitated by the two World Wars of the twentieth century and their economic bridge: the Great Depression.

### **Constituting the Economy: Institutionalizing National Income Accounting**

The economy became an object of measurement and representation largely during the 1930s.<sup>13</sup> There are a few, scattered references to “the economy” in economics journals from 1933-1934 (see, e.g, Neisser 1934; Petricsko 1932; Rogin 1933), but the use of the term takes off in 1934 in the works of Keynes and his American contemporary Simon Kuznets, the director of national income accounting at the National Bureau of Economic Research.<sup>14</sup> Kuznets and Keynes, respectively, developed different methods for

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<sup>13</sup> The term is not used by a President in a State of the Union Address until 1944, perhaps, and 1945, definitively. In 1944, Roosevelt expressed his goal “to maintain a fair and stable economy at home” and to be cautious “as our industrial economy expanded.” In 1945, he announced that “the war will leave deep disturbances in the world economy, in our national economy.”

<sup>14</sup> Another interesting text from 1934 to deploy the phrase “the economy” is Joseph Schumpeter’s *The Theory of Economic Development*. First written in German in 1911 and only translated into English in 1934, the text is difficult to place because of issues generated by translation, multiple editions, and different publication dates. In the first chapter, Schumpeter professes both skepticism and faith that something like “the economy” could be measured: “the social product does not exist as such. It is just as little the consciously aspired-to result of systematic activity as the economic system as such is an “economy” working according to a uniform plan. But it is a useful abstraction. We can imagine that the products of all individuals form a heap somewhere at the end of the economic period, which is then distributed according to certain principles” (1949, 9). By the end of the chapter, however, he declares that “the totality of the economic relations constitutes the economic system, just as the totality of social relations constitutes

estimating national income.<sup>15</sup> As I have already mentioned, accounting techniques—from double-entry bookkeeping, to capital accounting, to national income accounting—should not be understood as accurate or inaccurate mirrors of reality, but “as constituting economic practice through modes of inscription and analysis, enabling new forms of intervention that would not otherwise be possible” (Ogborn 2007, 84). And as James Scott has pointed out, “there is, then, no single, all-purpose, correct answer to a question implying measurement unless we specify the relevant local concerns that give rise to the question. Particular customs of measurement are thus situationally, temporally, and geographically bound” (1998, 26). In the particular case of national income accounting, differing indices for representing the economy engender different solutions to the problem of economic change.

This new enterprise for regularly publishing national income statistics, along with the language that accompanied it, relied heavily on what has become known as the marginal revolution in economics, or the theory of marginal utility that was developed by Jevons, Walras, and Marshall. This school of economics, soon to be called neo-classical, emphasized the psychological evaluation of utility as well as the concept of general equilibrium (Myrdal 1990; Schumpeter 1996). The theorists of marginal utility,

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society” (1949, 56). He then notes that “the economic world is relatively autonomous because it takes up such a great part of a nation’s life, and forms or conditions a great part of the remainder” (1949, 58). When he turns to the titular concept of the book, however, the terms become slightly jumbled. He defines economic development as “changes in economic life as are not forced upon it from without, but arise by its own initiative” (1949, 63). In order for this distinction to hold, then, Schumpeter has to separate “the economy” from “the surrounding world” (1949, 63). Should it turn out, Schumpeter writes, “that there are no changes arising in the economic sphere itself, and that the phenomenon that we call economic development is in practice simply founded upon the fact that the data change and that the economy continuously adapts itself to them, then we should say there is *no* economic development. By this we should mean that economic development is not a phenomenon to be explained economically, but that the economy, in itself without development, is dragged along by the changes in the surrounding world” (1949, 63). He concludes with a bang: “Nor will the mere growth of the economy, as shown by the growth of the population and wealth, be designated here as a process of development” (1949, 63).

<sup>15</sup> Efforts to measure and estimate national income, however, had been proposed as early as 1869 (Horváth 1990).

moreover, relied much more heavily on numerical and statistical techniques than their “classical” predecessors. And relevant to the discussion here, it was Jevons’ encounter with a text analyzing railroads that spurred him to use mathematical analysis for economic activities (Ekelund and Price 1979, n. 2).

American national income accounting took off during 1932 when Congress requested that the Secretary of Commerce compile the relevant data on income, although the agency quickly brought in the NBER, under the direction of Kuznets, to perform the task (Perlman 1987, 137; see also Patinkin 1976). The result of his team’s initial effort was published in 1934 as a report on the national income from 1929-1932. In this report, Kuznets begins by acknowledging the economic turmoil of the time and frames his analysis as a response to the need for quantifying the effect of the Depression on national production. He recognizes the need for more data but insists that a partial representation of economic activity will suffice: “national income measurements represent such an attempt to describe the total activity of the national economy under one aspect, *viz.* the size of the final net product” (1934, 1). Significantly, Kuznets acknowledges that his measurements are partial, but insists that they nonetheless represent the sum total of economic activity. He defines “net product” as the total value of “all commodities produced and all the direct services rendered during the year” once “the value of that part of the nation’s stock of goods that was expended” has been subtracted (1934, 1). He paraphrases this concept of net product as “that part of the economy’s end product that results from the efforts of the individuals who comprise a nation” (1934, 1). National income, he explains, is the total amount of money individuals were paid in order to produce that net product, and this aggregate income is theoretically equivalent to the

value of the net product. By looking at income tax records to see how much income was taken home by Americans, Kuznets claims to be able to create an accurate indicator of the entire economic system's condition.

Several years later, Kuznets followed up with a monograph measuring national income from 1919-1938 and using the same definition he had previously (1941). This time, however, he devoted considerable space to an excursus on the concept of national income itself. The phrase "the economy" appears in the first paragraph, as it did in the earlier article, but Kuznets quickly acknowledges some epistemological doubt. He notes that "a national total facilitates the ascription of independent significance to that vague entity called the national economy and may induce neglect of the patent fact that this entity comprises millions of individuals and firms, and scores of industries, economic groups, and regions" (1941, xxvi). He begins the formal text with a comment on the value-laden, subjective character of any national income assessment, insisting that "all income estimates are appraisals of the end products of the economic system rather than colorless statements of fact" (1941, 3). Some selection criteria, he stresses, must be used to determine what to measure. This argument becomes significant in the conclusion to the first chapter, when Kuznets questions the utility of measuring income with the nation as the unit of analysis. He asks: "why choose state units at all? Since they do not always constitute self-contained economic systems, the unit chosen is not necessarily a natural one.... A great deal of arbitrariness and historical accident ... may characterize the territorial composition of any given sovereign state" (1941, 51). Kuznets ultimately concludes in favor of the national unit, however, for pragmatic and political reasons; "since national income estimates ... are indispensable guides to [economic] policy," he

writes, “they should be for units corresponding to the areas within which state power can be exercised” (1941, 52). Kuznets acknowledges the arbitrariness with which one nation’s economy is cordoned off from another’s, but insists that “the estimates serve directly as guide posts in both scientific and everyday treatment of economic problems” (1941, 59). The choice of one particular indicator over another to measure and represent the economic domain was therefore a political one, and will always be so; it will alter and re-configure a social formation in which it becomes a significant, real abstraction.

In Britain, moreover, a similar consolidation and institutionalization of national income accounting was taking place under the direction of J.M. Keynes, who, it is worth noting, spent two years at the India Office reading and composing financial and other reports (Skidelsky 2005, 105). First published in 1936, Keynes’ *General Theory* prefers the construction “the economic system,” but nonetheless refers, in a crucial passage, to an object known simply as “the economy”; early in the text, Keynes’ announces his plan to show how all of classical economics is based on a “fundamental misunderstanding of how in this respect the economy in which we live actually works” (1964, 13). Classical economics, Keynes famously argues, falsely assumes that markets will naturally achieve full employment. More importantly for my purposes, however, is Keynes’ less-famous objection to the method by which his predecessors—namely Marshall and Pigou—visualized and represented the economic system as a whole. Keynes insists, along these lines, that one of his key innovations is the correct “choice of units of quantity appropriate to the problems of the economic system as a whole” (1964, 37). The choice of units common at the time, Keynes notes, were “the concepts of the National Dividend, the stock of real capital, and the general price-level” (1964, 37). The concept of national

dividend as defined by Marshall and Pigou, however, is essentially the same that Kuznets later adopted; it defines national dividend or income as the net value of all goods produced during a certain period.

Keynes objects to these definitions on two grounds. First, he claims “the community’s output of goods and services is a non-homogeneous complex which cannot be measured, strictly speaking” (1964, 38); and second, he insists that “the proper place for such things as net real output and the general level of prices lies within the field of historical and statistical description, and their purpose should be to satisfy historical or social curiosity” (1964, 40). For Keynes, a measurement of more practical—more political—utility is needed, especially one that can predict how individuals “will respond to a shift in the aggregate demand function” (1964, 44). He therefore argues that “unnecessary perplexity can be avoided if we limit ourselves strictly to the two units, [the quantity of] money and [the quantity of] labor, when we are dealing with the behavior of the economic system as a whole” (1964, 43). In other words, for Keynes the economy as a whole is best represented by the amount of money in circulation and the level of employment, even if these two indicators do not give a comprehensive picture. As with Kuznets’, Keynes’ concept of the economy is a political one; it is designed and used in order to alter the social formation rather than simply describe it. Keynes picks his units because of their potential use by the state in its attempt to re-form a social formation, not because of their comprehensiveness. These different methods of representation, however, prefigure and privilege specific policy responses to pauses or reversals of economic growth. The Keynesian indicators—money and unemployment—inherently focus policy on interest rates, the money supply, and public sector employment.



Keynes harbors substantially more skepticism about the existence of the object “the economy.” He therefore seeks to measure not the size or growth of this economy, but “to discover what determines at any time the national income of a given economic system and (which is almost the same thing) the amount of its employment” (1964, 247). Nevertheless, he does feel comfortable enough about the reality of an economic system. He argues, for instance, that “it is an outstanding characteristic of the economic system in which we live that, whilst it is subject to severe fluctuations in respect of output and employment, it is not violently unstable” (1964, 249). Although the measurement of an economic system’s total or net output is impossible, it is possible for Keynes to formulate general claims about its character or nature.

While Kuznets’ and Keynes’ respective methods for measuring national income were soon replaced by the calculation of GNP and later GDP (Perlman 1987), they established the parameters for those later measurements. Both economists insisted on the political necessity of regular measurements and estimations of the economy’s performance so that the state could respond accordingly and ensure that the economy both grew and functioned smoothly. And both were satisfied with partial figures that indexed the much larger, unobservable “economic system as a whole.” What they could not see directly in the flesh, they could see on the page by means of advanced numerical calculations.

The creation of “the economy” in the interwar period by the Western powers was thus political in the conventional, state-centric sense and in the more expansive sense developed by this dissertation. The regular measurement of something called the national economy was not just promoted but legally mandated in both the United States and

Britain for reasons primarily related to warfare and statecraft. Much like Davenant's representation of the balance of trade, Keynes' and Kuznets' representation of the national economy were developed to aid in the waging of war. After the relevant wars concluded, however, the objects that the state called into existence would acquire a life of their own and eventually come to dictate the content of state policies.

### **The Political Constitution of Economic Knowledge**

As Steven Shapin and Simon Schaffer have noted, "solutions to the problem of knowledge are solutions to the problem of social order" (1985, 332). This is as true of economic knowledge in the twenty-first century as it was for scientific knowledge in the seventeenth. But the problem of economic knowledge has at least two components. There is of course the familiar and conventional problem of deciding how one will measure economic activity. But there is also the more fundamental problem of deciding what it is that will be measured and thereby represented in the first place. I have described this second problem as one of vision and sight and it is here that the more interesting work of representation gets done. Accounts of economic activity and performance constitute and create rather than reflect or depict the economy as an object of knowledge—a real abstraction (see Mackenzie 2008). The great imaginative leaps of Davenant, colonial administrators, railroad managers, Kuznets, and Keynes each required the cordoning off and isolation of a new object of knowledge discerned by means of a distinct accounting technique for seeing and counting across large distances and times. In this chapter I have explored three such technologies of sight. Davenant's balance of trade calculations required on-the-ground observation and measurement of every staple commodity produced in England. This knowledge secured the early modern English social order by

ensuring that the war with France could be won. The classical political economists, by contrast, saw primarily with the mind's eye. They envisioned abstract, rational systems that ordered the process of exchange behind the backs of the individual exchangers. Their knowledge of the market system could therefore only identify problems able to be solved by the removal of obstructions to market flows. In Karl Polanyi's magnificent turn of phrase, "laissez-faire was planned, planning was not" (2001, 147). Efforts to extend and consolidate imperial dominion prompted efforts to measure and represent economic production on a national/imperial scale in the mid-nineteenth century. National income calculations, when they became institutionalized in the 1930s, were needed to recover from one world war and very soon to wage a second. Such calculations, however, necessarily make use of and extrapolate from statistical samples. The resulting representations of the condition of the economy are thus inherently partial. The choice of a particular indicator for a nation's economic performance creates a policy problem that only a select few interventions can solve. Keynes' employment and inflation statistics, for example, prioritized the creation of public sector jobs and interest rate management to stabilize the money supply.

In Rancière's terms, a representation of the economy is necessarily an act of policing. Calculations of national income partition a grid of activities into economic and non-economic, rendering some visible and therefore productive while keeping others invisible. Most famously, the national income calculations exclude any work done in the home (D. Hirschman 2016, chap. 5).<sup>16</sup> Kuznets stresses this point, aware of the value-laden character of the exclusion but seemingly unaware of his own role in maintaining and reproducing the denigration of the so-called private sphere. He argues that "limiting

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<sup>16</sup> For a thorough survey of the Marxist and Feminist critiques of this exclusion, see Weeks (2011).

national income to results of economic and productive pursuits forced us to exclude many satisfaction-yielding activities, primarily those conducted within the family, that may be considered part of life in general rather than economic activity proper” (1941, 55).

Housework, however, was not the only object excluded from the calculations. Also left out was the “compensation of robbers, murderers, drug peddlers, and smugglers” (1941, 4). As a final example of the political character of the assessments, consider how the impacts of natural disasters or disease outbreaks are factored in: the calculations would only include the increased amount of money spent on visiting doctors or hospitals and on reconstructing buildings. The damage done is passed over in silence. Looking solely at the accounting books might lead one to conclude that an earthquake actually increased economic growth. Calculations performed to measure economic performance are not innocent reproductions of reality, but themselves partition the sensible into visible and valued, invisible and irrelevant.

Equally significantly, the contemporary proliferation of quantitative indicators of overall economic performance—now encompassing stock market indices, unemployment statistics, consumer or business confidence levels, retail sales, housing prices, the number of new construction projects, interest rates, inflation and deflation rates, currency exchange rates, and changes in GDP and GNP—represents the economy as complex object which can only be tinkered with rather than fundamentally restructured. The impossibility of producing a general and comprehensive rather than partial and indirect representation of economic performance resonates with the notion that general and comprehensive reform of the economic system is impossible. If the economy is so complex that it can only be known through indicators, then it is too complex for rational

management. Furthermore, because it is always possible to point to an alternative indicator or to create a new one, knowledge about the economy as a whole is inherently *contestable*. Disputes over the more accurate or more significant indicators are keyed to different visions for improving a social order.

In the seven decades since Kuznets and Keynes started to write the economy into existence, the object has seemingly taken on a life of its own. GDP quickly assumed a hegemonic position as the most important measure of the economy's growth (D. Hirschman 2016; Perlman 1987; Philipsen 2015). Recently, however, GDP has become the target of criticism, and critics have proposed alternative indices like the Global Happiness Product in order to generate different priorities beyond pure growth conceived as increased production. I would press the criticism further, however, and question the need for counting on a national scale in the first place. I share the skepticism of Keynes and Kuznets about the possibility and utility of truly accurate national income assessments. But I am also skeptical of the increasing importance of counting as a routine of economic life, especially when the products of that counting are used to constrain or inhibit the collective action necessary to address global problems. In the early twenty-first century, economic calculations—and increasingly, economic forecasts—are trumpeted specifically to prevent the actions necessary to halt or reverse anthropogenic climate change. In contrast to Habermas, who argues that an independent economic domain legitimates the bourgeois state, I claim that an independent economy, along with the routines for measuring and representing it, constrain just as much as they legitimate contemporary state action.

Both the global climate and the global economy, however, are objects of knowledge, are discerned, identified, and represented by state-funded institutions and data-gathering agencies, and are increasingly measured in aggregate and abstract units. The attempts to see the climate in the form of global average temperature parallel the efforts to observe the economy in the form of GDP. This comparison risks associating my position with climate deniers, but to the contrary, I do not deny the reality of economic production. Rather, I object to the manner in which the numerical representation of growth polices our social formation, dividing its activities and routines into worthy and unworthy, countable and uncountable, relevant and irrelevant, or productive and unproductive. Seeing, measuring, and representing the economy is a political act.

## Chapter 2. Free Laborers, Enslaved Machines: The Politics of Laboring in Marx's *Capital*

In the previous chapter I described how new technologies of sight repartitioned the sensible and created new objects of knowledge. Here I will focus on working, a bodily routine as important as seeing.<sup>1</sup> Working, too, is a political activity—it contributes to the maintenance and transformation of social formations, which in turn can be distinguished from each other by the different styles and methods of working that predominate within them. Instead of speaking across multiple centuries, however, this chapter focuses narrowly on the text of one thinker whose insights are fundamental to my argument but whose absence from the previous chapter is significant: Karl Marx. In particular, I will concentrate on the debates surrounding Marx's relationship to the so-called labor theory of value.

Marx famously used the argument that only human labor-power creates value in order to ground his critical account of capitalism and political economy, but for a considerable amount of time it was thought that Marx's position was a metaphysical one (Boehm-Bawerk 2007; Carver 1982, 1998; Dobb 1975; Lukács 1971; Mandel 1981; Myrdal 1990; Schumpeter 1996). A half-century of scholarship, however, has challenged this interpretation (Althusser 2006; Harvey 2007, 2010; Postone 1996; Murray 2000; Rabinbach 1992; Wendling 2009; Chambers 2014). This historical and textual work has helpfully reframed Marx criticism, but one thorn remains in the new interpretations: none have adequately explained the hundreds of pages where Marx repeats *ad nauseum* that

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<sup>1</sup> Despite Arendt's helpful distinction between working and laboring (1998), I will use the terms interchangeably. Even accepting Arendt's arguments, labor and work do not differ under capitalism insofar both produce commodities and both become commodities. See Weeks (2011, 14–15)

machines and other means of production cannot create new value. This chapter attempts to fill that explanatory gap.

I argue that a political regime governing work, largely called into existence during the early nineteenth century in the North Atlantic world, distinguished human from machine labor by making it impossible to purchase or own a human. With the abolition of serfdom and slavery, capitalists were required to rent rather than own human labor-power; no such restrictions were placed upon machine or animal labor-power. Abolition, however, benefited not only those who were emancipated, but also the capitalists who would employ their former slaves. The cunning of capitalist reason bestowed a hidden boon on its favored sons, for now they were free to make use of human labor-power without having to pay for its production.

In order to purchase a slave, as with any other commodity, the capitalist presumably pays the cost of the slave's production; after the purchase, in order to maintain a slave, the capitalist pays the cost of maintenance. In order to purchase "free human labor-power," however, the capitalist only has to pay the cost to maintain the laborer during the period of the work, i.e. the wage.<sup>2</sup> The cost of production of the laborer—i.e. the cost incurred in sustaining the laborer from birth until the moment of employment—is not paid for by the capitalist employer, but by the laborer (or more realistically, the laborer's family). In other words, the capitalist only pays for the production of *labor-power* but receives the full value of the cost that was incurred to produce the *laborer*. The wage maintains the laborer and enables labor-power to be *re-*produced anew each day, but it is not equivalent to the cost incurred to sustain the laborer

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<sup>2</sup> "The proprietor of labour-power must always sell it for a limited period only, for if he were to sell it in a lump, once and for all, he would be selling himself, converting himself from a free man into a slave, from an owner of a commodity into a commodity" (Marx 1981, 271).



from birth to employment. What the capitalist would have had to pay in order to own rather than rent the laborer now appears on the balance sheet as surplus value. As in the previous chapter, accounting books will feature prominently.<sup>3</sup>

The peculiar ability of human labor-power to create value within capitalist societies therefore emerges from a *political regime* that legally distinguishes human from animal and machine labor by requiring different routines for the purchase of each. That is to say, this capacity to create value does not emerge from any ontological human essence. For Marx, the unique value-creating capacity of human labor within capitalist social formations, understood by Smith and Ricardo to be a natural endowment of the human species, is actually the product of a set of continuing, political processes and routines that distribute capacities for agency differently among humans (labor), machines (physical capital), things (commodities), and forces of nature (electricity). If indeed humans alone create value, it is equally true that humans do not create value alone. Without matter to be transformed into machines and commodities, without machines to preserve and later transfer the value created by humans, without commodities to receive that value and enable it to circulate on the market, and without forces of nature to power the entire system, human labor would not yield new value for capitalists. Value has never been created by humans alone, but has always been the product of a vast confederation of agents. Marx does not provide a labor theory of value; he provides an account of value that recognizes the distinct but equally necessary contributions of humans, machines, natural forces and things. This reading of Marx makes him an unwittingly pivotal figure connecting the original new materialism of the mid-nineteenth century, which cast itself

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<sup>3</sup> My account of surplus value here differs slightly from Marx's in its emphasis, but as I explain below, it is implied by Marx's analysis, even if not explicitly worked out.

in opposition to all forms of idealism, and the contemporary new materialism, which insists on the agentic capacities of matter in opposition to strong forms of anthropocentrism.

This framing sheds new light on Marx's repeated claims that machines, like all other means of production, do not create a new value. I explain this difference in historical and political rather than ontological or metaphysical terms. Machines do not appear to generate surplus value insofar as they must be purchased like any other non-human commodity, with the cost of production paid to acquire the machine and the cost of maintenance paid for as long as it is owned. Should machines become free laborers—in a distant but not unimaginable future—they too could produce surplus value. The old socialist-utopian dream that machine production could overthrow the capitalist mode of production thus rests on faulty assumptions about the uniqueness of humans as species.<sup>4</sup>

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<sup>4</sup> This notion experienced a recent revival. Moishe Postone does not find Marx's claims that machines cannot produce value at all surprising or problematic, but ties this limitation on value creation to the difference between wealth (use-value) and value: "that machines create no new value is neither a paradox nor an indication of a reductionist insistence on Marx's part to posit the primacy of direct human labor as the essential social constituent of wealth, regardless of technological developments. Rather, it is based upon the difference between material wealth and value" (1996, 196). Postone concurs with Marx that humans create both use-value and value, but machines can only create use-value. Postone contends, taking his cue from Marx's *Grundrisse*, that this fact about value, coupled with the rise of machine production, actually lays the foundation for the demise of capitalism. Because humans create value but machines only create wealth (use-value), as capitalism relies more and more on machines instead of humans for labor, less value will be spread over more wealth (Postone 1996, 197). To support his analysis, Postone relies heavily on Marx's claim that "there is an immanent contradiction in the application of machinery to the production of surplus-value, since, of the two factors of the surplus-value created by a given amount of capital, one, the rate of surplus-value, cannot be increased except by diminishing the other, the number of workers" (1981, 531). Postone concludes that total machine production, insofar as it would eliminate the production of surplus-value entirely, would make the demise of capitalism as we know it possible: "by inducing an enormous increase in productivity, the social forms of value and capital give rise to the possibility of a new social formation in which direct human labor would no longer be the primary social source of wealth" (1996, 197).

A splashier version appeared as the "Accelerationist Manifesto" by Williams and Srnicek (2013), who have the following to say about machine production: "Accelerationists want to unleash latent productive forces.... The existing infrastructure is not a capitalist stage to be smashed, but a springboard to launch towards post-capitalism. Given the enslavement of technoscience to capitalist objectives (especially since the late 1970s) we surely do not yet know what a modern technosocial body can do. Who amongst us fully recognizes what untapped potentials await in the technology which has already been developed? Our wager is that the true transformative potentials of much of our technological and scientific research remain

Machines are capitalist versions of slaves, and human laborers, despite their formal status as free, are in a fundamentally equivalent condition. It is this equivalence between slave and proletarian labor that Marx attempted to expose in *Capital*. Should machines be emancipated and granted freedom—much like corporations—they would produce surplus value for capitalists just as humans do.

In advancing this claim, I go against the grain of most readings of *Capital*. Most critics focus on the early chapters of *Capital* where Marx analyses value, the commodity fetish, and the mystery of money.<sup>5</sup> In these chapters, however, Marx the formal economist speaks the loudest, while Marx the critical historian whispers in the background or in the footnotes. As a result, textual evidence abounds in the early pages of *Capital* for interpreting the value-creating capacity of human labor as an ontological or natural endowment. But the later chapters are thoroughly historical and contextual; they tell the story of the emergence of the capitalist mode of production in England rather than pontificate about the nature of value and the commodity in the abstract. The point of the later chapters is to show *how human labor-power became abstract*. Not the commodity, then, but labor-power plays the lead. The bold claims that Marx makes in the opening chapters appear to be ontological or universal because they precede the historical material

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unexploited, filled with presently redundant features (or pre-adaptations) that, following a shift beyond the short-sighted capitalist socius, can become decisive. We want to accelerate the process of technological evolution. But what we are arguing for is not techno-utopianism. Never believe that technology will be sufficient to save us. Necessary, yes, but never sufficient without socio-political action.”

Other proponents of the view that full automation would end capitalism or create a world without work include Rifkin (1996) and Brynjolfsson and McAfee (2014).

<sup>5</sup> I have in mind Lukács’ influential opening to “Reification and the Consciousness of the Proletariat” where he announces: “It is no accident that Marx should have begun with an analysis of commodities when, in the two great works of his mature period, he set out to portray capitalist society in its totality and to lay bare its fundamental nature. For at this stage in the history of mankind there is no problem that does not ultimately lead back to that question and there is no solution that could not be found in the solution to the riddle of the commodity-*structure*.... That is to say, the problem of commodities must not be considered in isolation or even regarded as the central problem of economics, but as the central, structural problem of capitalist society in all its aspects” (1971, 83).

of the latter parts.<sup>6</sup> This arrangement makes it difficult to discern that what appears to describe all social formations in Part I in truth only describes capitalist social formations. Marx was very aware of the difficulty of the first chapters and altered them over several editions; he should have moved them to the conclusion.<sup>7</sup>

In order to substantiate these claims, I build on the insights of two developing lines of thought within the Marxian secondary literature. The first group of theorists has convincingly demonstrated that Marx understood the capitalist value-form—i.e. the form wherein surplus human labor is the sole source of new value—as historically contingent and unique to capitalist social formations. The second group argues that the source of Marx’s concept of labor-power was not Adam Smith and the classical political economists but instead the energeticist physicists and chemists of the mid-nineteenth century.

In what follows, I begin with an overview of the standard interpretation of Marx’s relationship to the classical labor theory of value and then challenge it by drawing on historical scholarship connecting Marx’s concept of abstract labor-power to nineteenth-century physics rather than political economy. In light of this discussion, I proceed to

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<sup>6</sup> Marx provides textual support for this view in several places. Most significantly, he notes in the postface to the second edition: “Of course the method of presentation must differ in form from that of inquiry. The latter has to appropriate the material in detail, to analyze its different forms of development and to track down their inner connection. Only after this work has been done can the real movement be appropriately presented. If this is done successfully, if the life of the subject-matter is now reflected back in the ideas, *then it may appear as if we have before us an a priori construction*” (1981, 102, italics mine). Furthermore, in note 34 he again cautions against the ontological or *a priori* reading of the value-form: “The value-form of the product of labor is the most abstract, but also the most universal form of the bourgeois mode of production; by that fact it stamps the bourgeois mode of production as a particular kind of social production of a historical and transitory character. If then we make the mistake of treating it as the eternal natural form of social production, we necessarily overlook the specificity of the value-form, and consequently of the commodity-form together with its further developments, the money form, the capital form, etc.” (1981, 174).

<sup>7</sup> Most likely Marx was following the plan he laid out for himself in the “1857 Introduction” where he proposes a method that starts from the abstract and moves to the concrete, rather than the reverse. However philosophically defensible or valuable this method might be, it succeeds mostly in creating confusion.

discuss Marx's arguments distinguishing human from machine labor and conclude that the differences are political rather than natural in origin.

### **Marx's Discovery of Labor-Power**

The central concept of *Capital*, I maintain, is not the commodity but labor-power. For the first century or so of Marx criticism, it was generally thought that Marx borrowed the concept of labor-power from Adam Smith and David Ricardo and proceeded to fix and improve it (Boehm-Bawerk 2007; Schumpeter 1996; Carver 1982; Mandel 1981). Within the last few decades, however, this consensus has been challenged on several fronts. One group has cast Marx as a critic rather than supporter of Smith and Ricardo, arguing instead that he revealed the historical origins of the concepts presented by his predecessors as universal and natural (Althusser 2006; Postone 1996; Harvey 2010; Murray 2000). A different group deemphasizes the classical economists and gives the credit for the discovery of labor-power instead to a few mid-nineteenth century natural scientists (Rabinbach 1992; Wendling 2009). In this section, I review these three interpretations in order to set up and frame my discussion of Marx's text, but I focus especially on the energeticist reading. Rabinbach and Wendling have done valuable work documenting Marx's reading of energeticist texts, but have concentrated their efforts on Marx's manuscripts, especially the *Grundrisse*. Here I focus on *Capital*.

In order to get to the chapters on labor-power, however, it is necessary to move quite quickly through the chapter on the commodity. Marx himself admits that to discover the source of surplus value and profit, it is necessary to turn to the sphere of

production, rather than exchange.<sup>8</sup> Rather than focus on the commodity, I will focus on abstract labor, or more specifically, two distinct kinds of abstract labor: socially necessary labor time and labor-power. Marx signals the importance of his concept of “human labour in the abstract” early in the book by connecting it to his distinction between use-value and exchange value,<sup>9</sup> but it is of singular importance that the various kinds of abstract labor be kept distinct. The abstract labor in which exchange value is measured is socially necessary labor time, whereas the abstract labor which creates new value is human labor-power.

For Marx, “what *exclusively* determines the magnitude of value of any article is therefore the amount of labour socially necessary, or the labour-time socially necessary for its production” (1981, 129; emphasis mine). The qualification of “socially necessary” is crucial; only the average amount of abstract labor-time in a given social formation counts in determining value. If a laborer makes a commodity in three hours, but the typical time of production is just two, the laborer will only produce a commodity bearing two hours worth of value. Conversely, if another laborer makes the same commodity in one hour, perhaps with the aid of a machine, the laborer will still produce a commodity bearing two hours worth of value. Eventually, however, the machine will spread and socially necessary labor-time will drop to one hour. Productivity gains thereby increase profit only in the short term, until competition kicks in.

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<sup>8</sup> “In its pure form, the exchange of commodities is an exchange of equivalents, and thus it is not a method of increasing value. Here, we see that all behind attempts to represent the circulation of commodities as a source of surplus-value, there lurks an inadvertent substitution, a confusion of use-value and exchange-value” (Marx 1981, 261).

<sup>9</sup> Concrete labor creates use-values, Marx argues, while abstract labor creates exchange value: “on the one hand, all labour is an expenditure of human labour-power, in the physiological sense, and it is in this quality of being equal, or abstract, human labour that it forms the value of commodities. On the other hand, all labour is an expenditure of human labour-power in a particular form and with a definite aim, and it is in this quality of being concrete useful labour that it produces use-values” (Marx 1981, 137).

Although socially necessary labor time is a type of abstract labor, it is distinct from labor-power. In *Capital*, Marx defines labor-power as “the aggregate of those mental and physical capabilities existing in the physical form, the living personality of a human being, which he sets in motion whenever he produces a use-value of any kind” (1981, 270). Labor-power is also a type of abstract labor, but unlike socially necessary labor time, which regulates how much value any commodity contains, labor-power is a commodity. Like all other commodities, the value of labor-power is measured in socially necessary labor time, although, as I will demonstrate in what follows, the price of labor-power is calculated differently than the price of all other commodities. Both labor-power and socially necessary labor time can be measured, but only the former can be purchased. Labor-power, unique among commodities, cannot be owned, but only rented.

In perhaps the most significant hinge of *Capital*’s primary thesis, Marx reveals the secret of surplus-value:

In order to extract value out of the consumption of a commodity, our friend the money-owner must be *lucky enough* to find within the sphere of circulation, on the market, a commodity whose use-value possesses the *peculiar property* of being a source of value, whose actual consumption is therefore itself an objectification of labour, hence a *creation* of value. The possessor of money does find such a special commodity on the market: the capacity for labour, in other words *labour-power* [*Arbeitskraft*]. (Marx 1981, 270, emphasis mine)

Much is of note here, but I find it most helpful to proceed backwards. Marx stresses that abstract labor-power, not concrete labor, is the “special commodity” which creates value. The creation of new value occurs when this capacity for laboring is “objectified” into a particular commodity. This capacity for objectification, however, is a “peculiar [*eigentümliche*] property” that belongs to human labor-power alone (more on objectification below). Marx’s analysis of capitalism and his conclusion that its growth requires increasing exploitation of humans hinge on this claim about peculiarity. It is

traditionally held that labor-power is peculiar or singular for Marx because it is *human*. This interpretation, I contend, places too little emphasis on a key word of the passage—“lucky.” The entire process of surplus-value creation occurs because a capitalist is “lucky enough to find” a “special commodity” that “possesses a peculiar property.” The diction explicitly suggests that only in very specific circumstances does human labor-power become the source of value. As Marx writes in the next sentence, “in order that the owner of money may find labour-power on the market as a commodity, various conditions must first be met” (1981, 270). In addition, the existence of a usable commodity conditions labor’s ability to produce value; if a commodity “is useless, so is the labor contained in it; the labor does not count as labor, and therefore creates no value” (Marx 1981, 131). The entire process whereby human labor-power creates value happens within the province of luck, not necessity, inevitability, or spontaneity. Human labor-power is unique in capitalist social formations because of contingent historical circumstances, not natural law.

Surplus value, Marx argues, is value created by labor-power after the value socially necessary to sustain and reproduce the laborer has been created.<sup>10</sup> Changes in the amount of labor socially necessary to produce a commodity affect the rate at which surplus value is produced. Two general means of producing surplus value, then, are available to the capitalist: first, increasing the amount of labor performed by the laborer after the equivalent value of the wage has been created, e.g. extending the working day, and second, producing commodities in under the socially necessary amount of time, e.g.

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<sup>10</sup> “If we now compare the process of creating value with the process of valorization [creating surplus value], we see that the latter is nothing but the continuation of the former beyond a definite point. If the process is not carried beyond the point where the value paid by the capitalist for the labour-power is replaced by an exact equivalent, it is simply a process of creating value; but if it is continued beyond that point, it becomes a process of valorization” (Marx 1981, 302).



increasing the efficiency of production. Marx refers to these methods, respectively, as absolute and relative surplus-value extraction. Relative surplus-value extraction, moreover, has the additional benefit of cheapening a laborer's means of subsistence by reducing the average amount of labor-time necessary to produce them.

The dominant interpretation of Marx holds that he used this concept of labor-power to improve the labor theory of value he took from the classical political economists.<sup>11</sup> Ricardo claimed that the value of a commodity is determined by the amount of concrete, individual labor-time necessary to obtain it, so the argument goes, and Marx corrected this formulation by claiming that value is instead determined by socially necessary, abstract labor-time. Ernest Mandel summarizes this view in his introduction to *Capital*, writing that "Marx's labor theory of value is a further development and perfection of the labor theory of value as it emanated from the 'classical' school of political economy, and especially of Ricardo's version" (Marx 1981, 42). Terrell Carver, similarly, argues that Marx "aimed to re-present the economic theory of his day in order to reveal the constituent conceptions of capitalist society, and to rid the theory of logical and historical confusions, using arguments from natural philosophy"

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<sup>11</sup> Proponents of this view include Marx's early and influential critic Eugen von Boehm-Bawerk, who concludes that "the grounds of [Marx's] conviction [that labor is the sole source of value] were opinions derived from authority. Smith and Ricardo, the great authorities, as was then at least believed, had taught the same doctrine" (2007, 78); Gunnar Myrdal, who insists that "Marx was right in saying that his surplus value theory follows from the classical theory of real value" (1990, 78); and Joseph Schumpeter, who endorses the "obvious truth" that "Marx must be considered a 'classic' economist and more specifically a member of the Ricardian group" (1996, 390). Terrell Carver agrees that Marx "accepted the assumption of classical political economists that ... what commodities have in common (apart from their basic materiality) can only be labour of a certain sort" but criticizes Marx's for doing so (1982, 95). In a later work, Carver repeats this claim, arguing that Marx "deployed a concept of labor that improved on the political economists logically, but still shared their presuppositions in natural philosophy" (1998, 67). Even Paul Samuelson presupposes Marx's equivalence with Smith and Ricardo (1971). Maurice Dobb, by contrast, emphasizes "the specifically Hegelian roots" of Marx's analysis of labor and value (1975, 142). R.N. Berki, however, insists that Marx derived his analysis of value from both Hegel and political economy (1979). A small number of scholars maintain that Marx derived his analysis of labor from Thomas Hodgskin; for a thorough review and critique of this view, see Hunt (1977).

(1998, 63). Carver emphasizes Marx's studies of Aristotelian natural philosophy and claims that Marx's concept of labor "as energy or force," i.e. abstract labor-power, uses the "language of contemporary physics—read as consistent with the framework and methods of natural philosophy" (1998, 80).

Several commentators, however, have begun to challenge this account in two distinct ways: first, by insisting that Marx either abandoned, broke with, or criticized rather than developed the classical political economists' theory of value, and second, by arguing that Marx borrowed from the new science of thermodynamics and energeticist physics, a scientific discipline that rejected Aristotelian natural philosophy (see Gregory 1977, 7).

David Harvey, summing up the first challenge, writes that the concept of socially necessary labor time "immediately differentiates Marx's theory of value from conventional theories of value (Ricardo's in particular). Marx turns an ahistorical, universal statement into a theory of value that operates solely under capitalist relations of production" (Harvey 2007, 15). Moishe Postone reaches very similar conclusions and argues that for Marx labor-power within capitalism assumes a "historically specific rather than transhistorical" form (Postone 1996, 4). In Postone's pithy phrasing, the mature Marx provides a "critique of labor within capitalism," rather than a "critique of capitalism from the standpoint of labor" (1996, 5). Postone emphasizes that "contrary to common interpretation.... Marx does not take over Ricardo's labor theory of value, render it more consistent, and use it to prove that profit is created by labor alone" (1996, 56). Marx, Postone declares, "writes a *critique* of political economy, an immanent critique of the classical labor theory of value itself. Marx takes the categories of classical political

economy and uncovers their unexamined, historically specific social basis” (1996, 56). Proof for Harvey and Postone’s thesis is prominently located in *Capital*’s subtitle: “a Critique of Political Economy.”

Under the name Value-Form Theory, several others have developed an interpretation emphasizing Marx’s historical account of value. Hans-Georg Backhaus argues, for instance, that in Marx “the analysis of the logical structure of the value-form is not separated from the analysis of its historical, social content. The classical labour theory of value, however, did not pose the question of the historical, circumstances of that labour which presents itself as ‘value-creating’” (1980, 107). For Patrick Murray, similarly, “Marx’s theory of value is not so much a theory of wealth and labour as it is a theory of the peculiar *social form* of wealth and labour in capitalism” (2000, 29). Murray insists that for Marx value “comes not from labour but from *a historically specific social form* of labour” (2000, 34). In short, value has no essence, but assumes different guises in different social formations.

The second challenge to the dominant interpretation of Marx’s account of value comes from the work of science historians Anson Rabinbach and Amy Wendling. Both link Marx’s discovery of labor-power to his encounter with the emerging fields of energeticist physics and thermodynamics (Rabinbach 1992, 72–73; Wendling 2009, 69–81). Energeticist physicists followed the lead of Hermann von Helmholtz, the introducer of the concept of labor-power (*Arbeitskraft*) into German, and maintained that the universe was one, large machine powered by energy or work (*Kraft*) (Rabinbach 1992, 57, 49). For Helmholtz, “*Kraft* thus described the transcendental force omnipresent in nature” (Rabinbach 1992, 51). Individual or concrete expenditures of energy, in this

paradigm, are just instances and pieces of the totality of energy that powers the cosmos as a whole. Famous for his lectures on the conservation of energy (the first law of thermodynamics), Helmholtz argued influentially for the unity of matter and force/energy (Rabinbach 1992, 48–51).<sup>12</sup>

According to Rabinbach, Marx applied these scientific advances to his economic theories when he “substituted the term ‘labor power,’ (*Arbeitskraft*) for labor, a move that he and Engels consistently acknowledged as a major, if not primary, conceptual discovery” (Rabinbach 1992, 72). Rabinbach claims Marx’s shift in language began during the composition of the *Grundrisse* when Marx encountered the “French engineering tradition” in the work of Pelligrino Rossi (Rabinbach 1992, 76–79). Wendling further substantiates Rabinbach’s thesis that Marx followed developments in energeticist physics by documenting his reading of Ludwig Büchner in the eighties (Wendling 2009, 75–76; Baksi 1996). Büchner, Rabinbach notes, was the “assiduous scientific popularizer” of Helmholtz’s ideas, and Büchner’s text *Kraft und Stoff* was “the bible of new materialism” (Rabinbach 1992, 50).

Marx’s reliance on energeticist physics and chemistry, however, can also be located in a few prominent places in *Capital*. First, Marx boldly exclaims that “the belated scientific discovery that the products of labor, in so far as they are values, are merely the material expressions of the human labor expended to produce them, marks an epoch in the history of mankind’s development” (Marx 1981, 167). The “scientific discovery” Marx mentions would be, in this interpretation, the energeticist claim that

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<sup>12</sup> The unity of matter and force should not be confused with Einstein’s mass-energy equivalence. For the energeticists, all matter required force or energy in order to exist: all motion, even on the microscopic level, requires force. Einstein’s equations, by contrast, govern the actual conversion of matter into energy during nuclear reactions.

individual instances of labor-power (*Arbeitskraft*) are expressions of the transcendental force powering the universe (*Kraft*). Many insist that Marx is referring to Smith or Ricardo. Given the context of the sentence, however, I think Rabinbach's reading is the more productive one. Marx's use of the phrase "material expressions [*sachliche Ausdrücke*]" implies that he has the energeticists, who insist on the commensurability of *Kraft* and matter, in mind. Rabinbach and Wendling both give as a paradigmatic example of the energeticist position a quotation from Büchner: "no force without matter—no matter without force" (Rabinbach 1992, 50; Wendling 2009, 3). It is this nineteenth-century, scientific discovery of the exchangeability of matter and force that Marx is referring to.

This reading of Marx's invocation of the "belated scientific discovery" also makes sense of his curious statement that human labor-power's "actual consumption is therefore itself an objectification of labour, hence a creation of value" (Marx 1981, 270). A Hegelian reading would gloss objectification in idealist terms, as the process whereby the rational subject pours forth its subjectivity into the object of its labor. An energeticist reading, by contrast, casts objectification as the use of energy or force (*Kraft*) to alter matter. The creation of value, then, should be understood in relative rather than absolute terms. The value created by human labor-power is not new to the universe; the first law of thermodynamics, of which Marx and Engels were aware (see Foster and Burkett 2008), prohibits such an outcome. It is only new to the capitalist's coffers.<sup>13</sup>

Further support of this reading can be found in Marx's repeated invocations of the works of Justus von Liebig, the influential organic chemist who will return in the next

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<sup>13</sup> Rabinbach notes: "As Helmholtz observed in a popular lecture...: 'We humans cannot create any labor power for human purposes but can only appropriate it out of the great general storehouse of nature'" (1992, 54).

two chapters. Liebig's new theories of digestion, human nutrition, and agricultural chemistry were all important for Marx. Liebig explained human digestion, as I will discuss more fully in the fourth chapter, by comparing the stomach with a furnace; he rejected the classical notion of an innate vital heat that was consumed during digestion in favor a notion of the human body as a machine capable of producing new energy for itself by consuming food as fuel. Liebig's account of digestion and the research it inspired made it possible to quantify and calculate the nutritional needs of individuals—what Marx calls the means of subsistence. Liebig also revolutionized the field of plant nutrition by demonstrating the importance of minerals to plant growth and explaining how plant fertilizers work.

When Marx cites Liebig in *Capital*, he draws explicitly from Liebig's theories of agriculture and nutrition, both of which were derived within the energeticist framework. As he puts it in a footnote, "to have developed from the point of view of natural science the negative, i.e. destructive side of modern agriculture, is one of Liebig's immortal merits" (1981, 638).<sup>14</sup> Liebig discovered that industrial agriculture took nutrients from the soil without returning them. Marx also draws from Liebig and the energeticists in his discussion of fatigue and overwork. As Rabinbach's book argues at length, before the energeticist discovery of the conservation of energy, idleness or tiredness among workers was explained as a moral failing; afterwards, it was explained as fatigue, or the expenditure of more energy during a day than was or could be replenished by food (Rabinbach 1992, 67). Marx notes, for example, that "within the 24 hours of the natural

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<sup>14</sup> Marx writes: "In modern agriculture, as in urban industry, the increase in the productivity and the mobility of labor is purchased at the cost of laying waste and debilitating labor-power itself. Moreover, all progress in capitalist agriculture is a progress in the art, not only of robbing the worker, but of robbing the soil" (1981, 638).

day a man can only expend a certain quantity of his vital force” (1981, 341). He further notes that “the limiting of factory labor was dictated by the same necessity as forced the manuring of English fields with guano. The same blind desire for profit that in one case exhausted the soil had in the other seized hold of the vital force of the nation at its roots” (1981, 348). He then cites Liebig’s report claiming the height of European conscripts had diminished because of overwork and malnourishment in the military. Marx’s familiarity with the new theories of fatigue and overwork firmly places him within the energeticist worldview. The explicit parallelism of the soil and the human body provides strong evidence that Marx places both on the same ontological plane in the terms provided by Liebig.

Rabinbach concludes his study by noting that “both orthodox defenders of Marxian science and critics of his reduction of human experience to labor and the laws of history have largely missed Marx’s own fundamental turn away from an exalted vision of labor as the activity that defines human nature to one that sees labor as a force of nature powering the productive engine of society” (1992, 80). According to Rabinbach’s reading, however, energeticist physics does not admit a distinction between human and other kinds of labor with respect to value: “labor is no longer a creative or singularly human act, it is one kind of work aimed at the production of use values” (1992, 77). Indeed, one of the major insights of the scientific field was to show how humans were metabolic organisms that exchange energy with their environment, just like every other entity whether machine or animal; Helmholtz “thus established the equivalence of human, animal, and inorganic mechanical work, applicable to all motion, irrespective of intelligence, skill, design, or any other extraneous circumstance” (1992, 59). For

Rabinbach, then, Marx simply abandoned the classical labor theory of value. Insofar as humans and machines both perform the same kind of abstract work (*Kraft*), they both, theoretically, should be able to produce value.

This conclusion of Rabinbach's, however, is contradicted by Marx's numerous assertions that only humans and not machines can create value. At first glance, these passages, which I will discuss in detail in the next section, seem to throw a wrench into Rabinbach's thesis. Wendling tries to explain away the discrepancy by arguing that Marx "deploys both the older [Hegelian] and the newer [energeticist] models of labor" (2009, 61). When Marx argues that machines cannot create new value, he is deploying the older model, but when he uses the term labor-power, he is deploying the new one. The ambiguity Wendling detects in Marx's analysis of labor power leads her to conclude that "Marx refuses to assimilate human labor fully to the model of work done by an animal or machine" (2009, 81). She nonetheless cautions that Marx's only partial abandonment of the older concept of labor "is not simply confusion on Marx's part. Rather, it is capitalism's anachronistic reliance on antiquated forms of human labor" (Wendling 2009, 133). For Wendling, capitalism itself "deploys a residual and operative humanism and vitalism that, although disavowed, persists" (2009, 133). In other words, capitalist production requires a distinction between human and machine labor-power that science has disputed.

In the next section, however, I take a different approach to explaining Marx's curious pronouncements about machine labor. Rather than detect in Marx some fundamental inconsistency or contradiction, as not just Wendling, but also Mirowski (1991, 174–185) have done, I explain the differences between human machine labor as



products of history. Contingent circumstances rather than the inherent logics of nature or capital account for the difference between human and machine labor-power. In short, human labor-power is peculiar because of the bourgeois revolutions that freed (some) humans, but not machines or animals, from the fetters of slavery.

### **Humans, Machines, and Value—Take One: Marx’s Unconvincing Arguments for the Uniqueness of Human Labor-power**

In this section I will analyze the passages in *Capital* that most explicitly support the interpretation that Marx subscribed to an ontological version of the labor theory of value. In the next section, however, I will turn to the passages that complicate and provide evidence against this reading.

Marx makes two explicit arguments for the uniqueness of human labor. The first argument appeals to a difference in consciousness between humans and animals, and the second argument appeals to a vitalist difference between humans and machines. Significantly, however, Marx admits that these two arguments “consider the labor process independently of any specific social formation” (1981, 283). They do not lend support, then, to an ontological claim that only humans can create value.

Marx first argues that human labor is unique because only humans conceive the products of their labor in their minds first. “What distinguishes the worst architect from the best of bees,” he notes, “is that the architect builds the cell in his mind before he constructs it in wax. At the end of every labour process, a result emerges which had already been conceived by the worker at the beginning, hence already existed ideally” (1981, 283–4). This claim echoes some of the arguments about labor and alienation in the *1844 Manuscripts* and Hegelian philosophy in general. The argument, however, even if it

is correct, still does not prove that only human labor-power can create value. Marx never suggests that value-creation is connected to consciousness. He argues consistently that value is determined by socially necessary labor time, not the conceptualization of an object in the mind of a human laborer before its construction. If anything, consciousness and will would make humans better at creating use-value insofar as they have powers of imagination and invention, but as Marx states constantly, use-value and value are distinct from each other. Consciousness and imagination do nothing to alter socially necessary labor time. They might distinguish humans from other creatures, but human labor-power, itself an abstraction, has no consciousness to speak of.

Marx's second argument distinguishes human labor from machine labor by appealing to vitalist discourse and requires lengthier discussion. Marx characterizes the difference between humans and machines thus: "living labor must seize on these [machines], awaken them from the dead, change them from merely possible into real and effective use-values. [They must be] bathed in the fire of labour, appropriated as part of its organism, and infused with vital energy" (Marx 1981, 289). Marx describes machines as dead or lifeless without human intervention to activate or run them. Human laborers, by contrast, have a "subjective factor...which sets itself in motion independently" (Marx 1981, 316). According to this logic, whatever "peculiar property" of humans that enables them to move themselves also makes them alone capable of creating value.

When Marx turns to machine production more generally, he emphasizes that "machinery, like every other component of constant capital, creates no new value, but yields up its own value to the product it serves to beget" (Marx 1981, 509). Marx even exclaims that it is "*strikingly clear* that means of production *never* transfer more value to

the product than they themselves lose during the labour process by the destruction of their own use-value” (1981, 312, emphasis mine). In accordance with the monopolization of value-creation by humans, “the means of production can never add more value to the product than they themselves possess independently of the process in which they assist” (1981, 313–14). Whatever value machines have has been transferred into them by human labor-power, where it remains preserved until it is later transferred into a commodity. Marx insists, against the argument that machinery can create value by replacing humans, that “surplus-value does not arise from the labour-power that has been replaced by the machinery, but from the labour-power actually employed in working with the machinery” (1981, 530). Thus, for Marx, a capitalist could not run a factory of only machines; such a factory would produce no new value.

Marx’s attempt to distinguish humans from machines using the language of vitalism, it is important to note, was influenced by widespread popular resistance to machines in Britain. Maxine Berg writes that in nineteenth-century Britain “the machinery question was a national controversy. It claimed the status of an intellectual debate. It was formulated as a policy question and was an important element in the strategic thinking among the various social and political interest groups of the period” (1980, 10). The debate concerned the relative merits of using machines to supplement or replace human labor and was formulated as “the machinery question” by Ricardo in later editions of his *Principles*. On one side, political economists such as Charles Babbage, Andrew Ure, and John Stuart Mill vigorously defended machines. Babbage and Ure argued for machinery’s ability to check, discipline, and control labor, as did Mill for machinery’s positive effect on productivity (Berg 1980; Zimmerman 1997). On the other

side, a diverse set of groups including Tories, laborers, radical political economists, Owenites, and middle-class reformers all opposed machinery either for destroying traditional life or for replacing and devaluing human labor (Berg 1980).

George Caffentzis refers to this historical context in order to defend Marx's arguments about human uniqueness and to insist that machines can never be sources of value. He begins by noting that "Marx was anxious to differentiate labor as it appeared in political economy and labor (or work) as it appeared in thermodynamics" (Caffentzis 1997, 35). Marx's claim that machines cannot produce value, in this account, functioned as a critique of nineteenth-century physicists' dream of a perpetual motion machine (1997, 38). Caffentzis suggests that Marx's argument about machines and value was linked to his political struggles on behalf of a working class that sometimes endorsed machine-breaking (1997, 42). Marx's theory of value was a "political card that was played in a political game" (1997, 45) and buttressed a polemical point that capital would be unable "to solve its crisis internally through the self-creation of value via machines" (1997, 47). Caffentzis, moreover, aims to provide new arguments (not made by Marx) defending a strong distinction between machines and humans. He recognizes that "the answer cannot lie in some positive feature of labor per se" (1997, 53), so he argues instead that the answer lies in labor's "negative capability, that is, its capacity to refuse to be labor" (1997, 54). For Caffentzis, because humans always have the choice to refuse to labor, even at risk of death, they alone can produce value.

I find neither Caffentzis' nor Marx's arguments compelling, however. As Rabinbach shows, Caffentzis has the arguments backwards. It was Helmholtz and the energeticists, by positing the universality of *Kraft* and the conservation of energy, that

“permitted the old phantom of *perpetuum mobile* to be exorcised” (Rabinbach 1992, 58). Marx attempted to combine not to differentiate labor as it appeared in political economy and thermodynamics. Furthermore, the ability of human laborers to stop laboring has little to do with their unique ability to create value, even if it does logically distinguish them from most machines. Caffentzis’ logic would support the claim that animals as well as humans can produce value; anyone who has interacted with an animal—especially a cat or a mule—knows just how easily and quickly one will refuse to do some sort of labor. The ability to refuse labor is not a uniquely human capacity. A Romantic conception of mind (negative capability is Keats’ term, after all) or a strong metaphysics of free will are not credible grounds for an anthropocentric labor theory of value. Marx’s distinction, moreover, between vital humans and inert machines cannot stand in light of recent criticism by Latour (2005) and Bennett (2010) showing that humans, too, are confederations or assemblages of diverse types of human and non-human matter and that material assemblages like a power grid or a computer have vital power and agency.

Marx makes another attempt to single out human labor-power by arguing that it alone both preserves and adds value while at work. He describes the supposedly unique ability of human labor-power to create value as a *gift of nature*: “this property therefore which labour-power in action, living labour, possesses of preserving value, at the same time that it adds it, is a gift of nature which costs the worker nothing, but is very advantageous to the capitalist since it preserves the existing value of his capital” (1981, 315). In the German text, Marx repeats the word for gift of nature (*Naturgabe*) twice. For him, then, the duality comes from the division between concrete labor and abstract labor-power; the former preserves whereas the latter adds value. By calling this duality of

human labor a “gift of nature” Marx suggests that humans have always had the “peculiar property” enabling them to create new value.

But just how did humans acquire this property, this gift? The anti-religious, anti-establishment, anti-idealist Marx would never have accepted a metaphysical account of the soul. The most important word in the passage is therefore “gift.” To whom does the gift go? To the capitalist, of course! Without this gift, there would be no surplus value. The question of human uniqueness therefore becomes: why is it that the capitalist rather than the laborer receives the benefit of the gift?

### **Humans, Machines, and Value—Take Two: Marx’s Convincing Arguments for the Uniqueness of Human Labor-power**

To make matters even more perplexing, in a chapter on machine production Marx explicitly complicates his earlier “gift” formulation and claims that the ability of human labor to create value is a gift of *history* rather than nature:

Unless labour has attained a certain level of productivity ... there can be no surplus labour, hence no capitalists.... Thus we may say that surplus-value rests on a natural basis, but only in the very general sense that there is no natural obstacle absolutely preventing one man from lifting from himself the burden of the labour necessary to maintain his own existence, and imposing it on another.... *It would be absolutely mistaken to attach mystical notions to this spontaneously developed productivity of labour, as is sometimes done.* It is only when men have worked their way out of their initial animal conditions, when therefore their labour has been to some extent *socialized*, that a situation arises in which the surplus labour of one person becomes a condition of existence for another.... The existing productivity of labor, from which [capitalism] proceeds as its basis, is a *gift, not of nature, but of a history* embracing thousands of centuries. (Marx 1981, 647, emphasis mine)

Marx makes several important moves in this passage. The turning point is his denunciation of “mystical notions” being applied to the historically developed productivity of labor. It would be difficult to find a more explicit rejection of the so-called labor theory of value than the italicized sentence above. One reading would have

Marx ridiculing Smith and Ricardo for assuming that value's determination by labor-time is a natural or metaphysical law. An alternative reading would make Hegel into the target, attacking his claim that labor develops according to the laws of Spirit. Still yet another reading would have all three as targets. Either way, the main point is that contingent circumstances, not natural law or Providence, created the conditions for labor to become the source of value and therefore also surplus value. In the next sentence, moreover, Marx explicitly historicizes his earlier argument distinguishing humans from animals. By noting that humans used to be like animals, but worked their way out of that condition, Marx invites a parallel argument about other animals, and, I speculate, machines. They too might one day work themselves into a new condition and be able to produce value.<sup>15</sup> Matter and machines, like humans, have not only histories but also futures. Furthermore, Marx's emphasis on the *socialization* of labor is significant. Labor must be divided and organized on a large scale, not just within a single household or for an individual, in order for it to be productive and universal enough to become the measure of value and the source of surplus. Labor may have become the source of surplus value in nineteenth-century Britain; it has not served in this capacity since of dawn of time.

In the first chapter of *Capital*, moreover, Marx writes that “this division of the product of labor into a useful thing and a thing possessing value appears in practice *only* when exchange has acquired a sufficient extension and importance...*from this moment on*, the labor of the individual producer acquires a twofold social character” (1981, 166, emphasis added). In other words, labor acquires a dual character *only* sometime after the

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<sup>15</sup> In one account, the invention of computers that use algorithms already achieved this transformation. Computers certainly move independently. Self-driving cars are now more of an inevitability than they are imaginative fancy. Machines do need power, but humans need food. In another popular yet far-fetched account, the merging of human brains with computer networks—the so-called singularity—would functionally achieve such a transformation.

sixteenth century, at the earliest. Marx echoes this claim in the next paragraph when he insists that only “by equating their different products to each other in exchange as values, [do] they equate their different kinds of labour as human labour” (1981, 166). Exchange of commodities, according to Marx, precedes the emergence of abstract labor-power. This point closely resembles Marx’s contention in the “1857 Introduction” that the “abstraction of labour generally is not merely the mental result of abstracting from a concrete totality of labours” (Marx 1996, 150). Instead, “indifference towards the specific type of labour corresponds to a form of society in which individuals transfer with ease from one type of labour into another and the specific type of labour is contingent to them, hence indifferent” (1996, 150). Abstract labor emerges only when a specific social formation makes it possible.

These passages, if properly understood and contextualized, suggest that machines might not have created value at the beginnings of capitalist social organization, but that nothing in principle denies they might do so in the future. They imply that the differences between human and machine labor-power are products of politics and history, not of nature. Marx based surplus value on human labor’s ability to create rather than merely transfer value. I contend, however, that a bit of historical sense supports a more nuanced account. In short, the new value that appears to come from human labor-power exists because the capitalist does not have to pay the total, accumulated cost of producing and sustaining the human laborer, but only the amount required to sustain the worker for the period of the wage contract.

Because, machines do not (yet) have a livelihood independent of their work for the capitalist, when they are through laboring, the capitalist *turns them off*. This act is not



strictly necessary, but is done simply in order to save the capitalist money. The case is different with the human laborer, who must live and survive even when she is finished working. The human laborer, then, must not be able to produce or otherwise acquire her own means of subsistence, or else the capitalist could not force her to produce surplus value in order to survive. The laborer, Marx writes, “must be compelled to offer for sale as a commodity that very labor-power which exists only in his living body” (Marx 1981, 272). If the capitalists could also turn laborers off, historical experience suggests that they would do so gladly.

Several political revolutions in nineteenth-century Britain, however, were necessary for creating a social formation in which the vast majority of humans were compelled to sell their labor-power in order to survive. In the previous chapter, I surveyed some of them. Of particular importance were the re-evaluation of commerce during the inauguration of the British Empire and the efforts by the classical political economists to imagine rational markets. I will isolate two more.

The first transformation—the Enclosure movements—eliminated common lands in the English countryside, effectively forcing a mass migration to the cities (Marx 1981, 877–885; Polanyi 2001). As a result, a large number of people were now without the ability to acquire their own means of subsistence directly and were therefore forced to work in the developing industrial economy in order to survive. The second transformation—the Poor Law Reform of 1834—created a true labor market in England for the first time by radically restricting the aid given by the British government to impoverished people (Polanyi 2001, 86–87; see also Lees 1998; Hamlin 2009). Both of these changes helped configure a social formation in which employment for a wage was a

necessity of life. Marx, moreover, rejects the thesis that a labor market is natural and claims that “nature does not produce on the one hand owners of money or commodities, and on the other hand men possessing nothing but their own labor-power.... It is clearly the result of a past historical development, the product of many economic revolutions, of the extinction of a whole series of older formations of social production” (Marx 1981, 273). A series of political revolutions, then, might make it possible for machines to create value, just as similar transformations were necessary for humans to acquire such a power. Machines also have a history and a future.

Another important transformation came from the world of accounting. The most important way that capitalist accountants had singled out human labor-power was to divide capital into two forms: constant capital and variable capital. Constant capital “does not undergo any quantitative alternation of value in the process of production,” whereas variable capital “does undergo an alteration of value in the process of production” (Marx 1981, 317). It should be no surprise that Marx calls the means of production constant capital and human labor-power variable capital. Marx explains that what he calls variable capital “is continually being transformed from a constant into a variable magnitude” (Marx 1981, 317).

R. A. Bryer has argued that Marx’s distinction was borrowed directly from contemporary accounting practices. The transfer of value from the means of production to the commodity that Marx refers to now goes under the name depreciation. In account books, the cost of the machine is slowly recovered as its depreciated value is transferred into the commodities produced and then sold. Human labor, by contrast, is accounted as variable capital. Property, i.e. fixed capital, depreciates over the average lifespan of the

item; human labor-power, insofar it is not the property of the capitalist, has a variable cost and return because the labor-power must be re-purchased each week at potentially different wages. Its value *in the accounting books* is used up and renewed again. Marx's studies of accounting in the 1860s convinced him, Bryer argues, that "capitalists accounted for costs and revenues using an inchoate labour theory of value, as though their profits were the surplus value they had appropriated from their own workers" (2008, 31). In other words, capitalist accounting techniques created and then maintained the artificial division between machine and human labor-power, and Marx's study accurately reflected the situation. I mentioned the performative and creative powers of account books in the previous chapter, and here they are at work again, partitioning the sensible into depreciable property and renewable human labor-power.

Furthermore, machines and humans have different legal capacities and statuses. Human laborers have certain rights, the powers to engage in contracts, and most importantly, the ability to alienate their labor-power from their person, offering only the former for sale. Machines, however, are still property, as many humans used to be and some still are. Only a human's labor-power is legally and abstractly distinct from its material form. The capitalist thereby purchases human labor-power differently from all other commodities. "The value of labour-power is the value of the means of subsistence necessary for the maintenance of its owner" (Marx 1981, 274), but the value of a machine, by contrast "is determined not by the labour process it enters as a means of production, but by that out of which it has issued as a product" (1981, 314). The value of human labor-power is the cost of maintaining the laborer, but the value of all other commodities is the cost of their production. The cost of a computer, for example, is the

cost of all the materials (including labor-power) used in its production. The cost of labor-power, however, is not the cost of the food, the shelter, etc. that were required to sustain the laborer until the beginning of employment, but only the cost necessary to sustain the laborer for the period during which work is performed.<sup>16</sup>

Marx accounts for the special way human labor is purchased by stressing that the value of labor “depends on the conditions in which, and consequently on the habits and expectations with which, the class of *free* laborers has been formed. In contrast, therefore, with the case of other commodities, the determination of the value of labor-power contains a *historical and moral* element” (1981, 275; emphasis mine). In short, because humans now exist mostly as a class of free rather than enslaved laborers, they cannot be purchased.<sup>17</sup> History and morality, so to speak, freed them from bondage. Machines and all other commodities, however, remain property. Consequently, the capitalist only has to pay to maintain the human laborer and receives for free use of all the past labor-time embodied in the laborer: “the past labour embodied in the labour-power ... and the daily cost of maintaining labour-power and its daily expenditure in work, are two totally different things” (1981, 300). If the capitalist had to “buy” the laborer in the same way the capitalist had to buy the machine—by paying the *total, accumulated cost* of its production—the purchase of labor-power would not appear to the capitalist to create new

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<sup>16</sup> It could be argued that Marx rejected this explanation by pointing to the following passage: “the sum of means of subsistence necessary for the production of labour-power must include the means necessary for the worker’s replacements, i.e. his children, in order that this race of peculiar commodity-owners may perpetuate its presence on the market” (1981, 275). Even if this claim is correct that the wage covers the cost of raising children, it would not disprove my claim that the capitalist/employer acquires for free this value: if capitalist A hires a laborer, A acquires for free what capitalist B paid to the laborer’s parents. It does not matter *who* paid the cost of the laborer’s development, the family or another capitalist; it only matters that the capitalist who employs the laborer in order to extract surplus value did not pay it.

<sup>17</sup> The phrase “habits and expectations” refers to the various circumstances of nationality, culture, or geography that cause the price of labor-power to vary, but the presence of the otherwise unnecessary word “free” supports the reading I have offered.

value.<sup>18</sup> Surplus value is not created *ex nihilo*, but comes from the value transferred from the sole product that capitalists cannot purchase because they cannot buy humans, only their labor-power. The value transferred by humans, in other words, is new only in a company's accounting books. It already existed as the energy stored in a human body access to which was acquired for free by the capitalist. Surplus value in the capitalist's eyes "has all the charms of something created out of nothing" (Marx 1981, 325). The capitalist, however, is deceived by appearances.

Marx comes tantalizingly close to an explicit realization of the commensurability between human and machine labor-power, but instead of arguing that machines can create value, he instead claims that they aid only in producing surplus value and thus perform a "gratuitous service":

Both in the case of the machine and of the tool, we find that after allowing for their average daily cost, that is for the value they transmit to the product by their average daily wear and tear, and for their consumption of auxiliary substances such as oil, coal, and so on, they do their *work for nothing*, like the natural forces which are already available without the intervention of human labour. The greater the productive effectiveness of the machinery compared with that of the tool, the greater is the extent of its *gratuitous service*. Only in large-scale industry has man succeeded in making the product of his past labour, labour which has already been objectified, perform gratuitous service on a large scale, like a force of nature. (1981, 510, emphases mine)

Several aspects of this passage are especially significant. First, Marx makes the familiar claim that machines transfer their own value as they depreciate, but then he makes a peculiar move himself. He insists that machines do some of their work for free. Of course, the gratuitous gift is for the capitalist, not for the machine (or the earth). After humans have transferred the equivalent of their wage-value to a commodity, they produce surplus for the rest of the day, whereas machines "work for nothing." From the

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<sup>18</sup> If a machine were rented, it would then be able to produce surplus value in the same way as a human, according to this logic. Marx does not consider this possibility, however; for him, machines are always capital and therefore always owned as property.

perspective of the (vital materialist) capitalist, however, these conditions are functionally equivalent. In each case, the capitalist gains by forcing the laborer—human, machine, or force of nature—to work gratuitously. In each case some form of energy, i.e. labor-power, is expended without compensation. Human labor-power is unique only because humans are forced into a system of commodity-production and wage-earning such that the capitalist does not have to purchase or pay for the human laborer's cost of production. Because most humans must enter a labor market to survive, but cannot themselves be purchased, they do not have the luxury of demanding compensation for the cost of surviving up to the beginning of employment. Marx maintained a strong boundary between humans and nature, placing machines on the latter side. If we let machines trouble rather than buttress the human/nature divide, however, it is possible to interpret *Capital* differently than is customary. Marx does not glorify human labor, but equates it with other forces of nature put to work by capitalism. The final sentence of the passage, which Marx uses to describe machines, is equally descriptive of human labor as well, according to the interpretation of surplus value just offered. The sentence could just as clearly and easily describe humans, who under capitalism have “been objectified” and required to “perform gratuitous service on a large scale”—i.e. the production of surplus value.

Marx makes a similar point about free machine labor-power in the chapter on the accumulation of capital. In order to explain capital accumulation, he again invokes “the natural property of living labor to keep old value in existence while it creates new” (1981, 755). Without this natural property, so the logic goes, labor-power would use up rather than transfer the value stored in the means of the production. In the very same paragraph,

however, Marx also explicitly compares machines to forces of nature that work for free: “in the same proportion as these instruments of labor serve as agencies in the formation of products without adding value to those products ... to that degree do they perform, *as we saw earlier, the same free service* as the forces of nature, such as water, steam, air and electricity” (1981, 757, emphasis mine). Of course, the power of forces of nature are only ‘free’ to the owners of means of production because they did not have to pay to create them. The same is true of free laborers.

Marx is right, to an extent, about human labor’s unique ability to create value, but this unique ability is linked to the political distribution of agency within a capitalist social formation and not to any exceptional power of humans. Humans used to be enslaved, whether as serfs or more formally, but then they were supposedly “liberated” and “allowed” to sell their labor-power; “the starting point of the development that gave rise to both the wage-labourer and the capitalist was the enslavement of the worker. The advancement made consisted in a change in the form of servitude” (Marx 1981, 875). The main difference between humans and machines is simply that machines can still be owned as slaves. The ability to create value is not the hallmark of some special human power, but a very specific form of domination: “the Roman slave was held by chains; the wage-labourer is bound to his owner by invisible threads. The appearance of independence is maintained by the constant change in the person of the individual employer, and by the fiction of the a contract” (Marx 1981, 719).

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Only human labor-power creates new value for capitalists, but the special arrangement singling out humans is the product of various political processes supposedly

liberating humans from their chains but actually making them dependent on a monetary wage to survive. The “peculiar property” of humans who live in a capitalist social formation is not an exalted species-essence, then, but a form of exploitation. The capacity to create value is a particular kind of agency available to humans only in capitalist social formations. Only humans currently have special rights enabling them to sell their labor-power while preventing them, uniquely among all other material entities, from becoming property.

We have known for a long time that capitalism depends on a juridical regime supporting property and markets. But my reading of Marx shows how capitalism also depends on a distribution of capacities for agency making humans appear differently than all other species and entities. This distribution of agencies shares many features with Rancière’s “partition of the sensible” established by a “police order” (Rancière 2004). Marx’s analysis of machines and value suggests that the distinction the economic order admits between humans and machines is itself a partition not just of what is sensed, but also of various capacities for agency itself. Within the capitalist social formation, agency is partitioned not physically or materially, but abstractly. Machine labor is only abstractly different than human labor: from a capitalist’s perspective one provides “gratuitous service” while the other “creates new value.” The boundary between the kinds of labor is maintained by distinct routines of accounting and employment, not nature or metaphysics.

By describing value as “social” (rather than individual, natural, or material), Marx’s analysis leaves room for just such a conclusion. “Not an atom of matter enters into the objectivity of commodities as values,” he claims; “their objective character as



values is therefore purely social” (Marx 1981, 138–9). No law of nature prevents machines or animals or other non-human assemblages from creating value for a capitalist, only the configuration of a capitalist social formation. If value is purely social—i.e. made possible and conditioned by the configuration of a social formation—then it could have different sources under a differently configured but still capitalist social formation. As a result, the total automation of production would not end capitalism or create a more ethically satisfying version of capitalist production, as many have maintained by interpreting Marx on the labor theory of value in ontological rather than historical terms. Totally mechanized production is not qualitatively distinct from production divided between humans and machines. It merely signifies continued slavery of increasingly complex machines.

Human capacities for agency, including the capacity to create value and sustain perpetual economic growth, are not timeless but thoroughly conditioned by historical circumstances. Acquiring the ability to manipulate and control electricity in the nineteenth century vastly expanded the capacities of human actors, perhaps inaugurating a new geological epoch, the Anthropocene. When fossil fuels run out, moreover, human agency will be vastly diminished. Agency also changes across larger time scales. Developing the ability to manipulate fire for cooking is said to have enabled the human brain to take on the form in which we know it today (Wrangham 2009). In both cases, a confederation with a natural force—electricity and fire, respectively—radically altered the capacities of human agency. Furthermore, any capacity for agency requires cooperation among many actors. In order to digest food and move independently, humans depend on billions of live bacteria in their gut. Analogously, in order to create value,

humans require forces of nature, tools, machines, and materials. Being able to extract new value from human labor-power on a global scale stands as just one moment in a much longer history of human capacities for agency.

### Chapter 3. The Queer Politics of Touching: Walt Whitman's Theory of Comrades

Like forms of vision and working, regimes for touching others maintain and transform social formations, thereby doing the work of politics as defined in the introduction. In our contemporary conjuncture, the dominant regime of touch maintains specifically heteronormative social formations. In order to demonstrate this argument, in this chapter I will examine a particular group of poems by Walt Whitman, first published in 1860, but revised twice—the “Calamus” cluster in *Leaves of Grass*. Whitman once opined that “the special meaning of the ‘Calamus’ cluster ... mainly resides in its political significance” (1996, 1035).<sup>1</sup> In the poems themselves, he proclaims that the “the main purpose of these States is to found a superb friendship, exaltè, previously unknown” (285). Throughout “Calamus” and on select occasions in the rest of *Leaves of Grass*, Whitman would call these friends comrades. And comrades for Whitman, more than anything else, relate to each other through physical touch. The “Calamus” poems, I claim, suggest that acts of touching, rather than “lawyers,” an “agreement on paper,” or “arms” (449)—Whitman’s metaphors for the social contract—holds a democratic polity together. A group of comrades who touch each other live together in what Whitman calls a “city of Friends” (284). To paraphrase James Martel, Whitman seeks to “re-conceptualize” touching “itself as a political endeavor” (2009, 626).

Whitman’s poems about comrades, I argue, imply that social formations are maintained and reconstituted by the regimes of touch that circulate and predominate within them. To return to Elias’ description of social figurations as dances (discussed in

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<sup>1</sup> All subsequent Whitman citations, both poetry and prose, come from this Library of America edition.

the introductory chapter), the inhabitants of a particular social formation all dance the same routine of touch in their physical encounters. A particular social formation can therefore be distinguished by the regime of touch that is promoted and enforced within it. But a social formation, in turn, continues to exist only insofar as this style of touching can be repeated and perpetuated. In the contemporary, American regime of touching, for example, one touches hands with an acquaintance, hugs a family member, and kisses a single, intimate, sexual partner. Our legal codes enforce this regime of touch by promoting and recognizing only the (aspirational) institution of monogamous, permanent marriage. It is not by accident that Christian priests conclude a marriage ceremony by declaring that the husband “*may now* kiss the bride.”

Comrades who practice a distinct style of touching each other outside the bonds of monogamous marriage therefore constitute their own, alternative social formation. A “city of Friends,” however, would exist alongside, yet critically distinct from, a formal nation-state. Jason Frank has associated Whitman’s imagery of touching comrades with the concept of “promiscuous citizenship,” wherein erotic, anonymous encounters among strangers serve “to affectively bind citizens together as a self-authorizing people” (2011, 156). In my interpretation of “Calamus,” however, the touch of comrades flourishes in marginal, quasi-public spaces and rather than strengthen the ties of an already existing nation, these physical encounters create novel, protean, and peripheral assemblages that often escape the recognition of the public at large.

As more political theorists have turned to Whitman, several distinct lines of interpretation have emerged. One of these follows George Kateb’s influential celebration of Whitman’s “democratic individuality” and its “three components: self-expression,

resistance in behalf of others, and receptivity or responsiveness (being ‘hospitable’) to others” (2011, 20). Kateb’s elevation of individuality, however, leads him to describe comradeship as “suffocating” and “sinister” (2011, 38), so he largely omits “Calamus” from his analysis. Jane Bennett, representing a different line of thought, highlights neither Whitman’s individualism nor his commitment to democracy, but rather his materialism, “the way he conceives materiality—both human and nonhuman—as a living force” (2011, 132). Bennett’s reading of Whitman’s account of Sympathy as an “impersonal, ontological infrastructure” reinforces this focus on Whitman’s cosmological vision rather than his concept of individuality (2014, 239). Bennett demonstrates that for Whitman, touch both expresses and intensifies Sympathy’s magnetic and infectious force of affinity permeating the cosmos (2014). I follow Bennett in focusing less on individual human agency and more on the vitality of material bodies in connection with each other.<sup>2</sup>

In advancing my argument about touching, moreover, I rely on the recent literary criticism that, taking its lead from Foucault’s histories of sexuality, resists drawing Whitman into the matrix of modern homosexuality and emphasizes the complexities of his understanding of touching between men (Sedgwick 1985; Erkkila 1989; Grossman 1990; Moon 1991; Reynolds 1995; Yingling 1996; Champagne 2008; Coviello 2013). Erkkila, emphasizing the connections between the sexual and political themes in Whitman’s poetry, maintains that for Whitman “the erotic force of love becomes a democratizing force that erodes the traditional boundaries of sex, race, class, family, and propriety and gives rise to alternative forms of social and sexual relations” (2002, 122).

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<sup>2</sup> As Bennett writes, “*Leaves of Grass* arranges words in such a way as to expose the uncanny truth that human action is never exclusively a matter of human agency but an event profoundly dependent upon the participation of a bevy of specimens, from gravity to sunlight to bacteria to plastic to metals to plant matter, which act in concert and in conflict with us” (2011, 135).

She insists, moreover, that “we read Whitman’s expression of sexual, emotional, and social intimacy among men not as a monolithic homosexual presence but as the complex, multiply located, and historically embedded sexual, social, and discursive phenomenon it was” (1989, 167). Michael Moon has shown, similarly, that for Whitman, “sexuality is fundamentally a political matter because it can never simply be ‘sexual,’ that is, unrelated to other economies in the culture besides the erotic” (1991, 159). The “Calamus” poems, these studies convincingly show, explore explicitly political themes even if the language and imagery depict seemingly mundane or sentimental matters.

Neither Whitman nor his comrades, then, should be understood as “homosexual.” According to contemporary medical and psychological discourses, homosexuality is an enduring, erotically charged desire for others of the same sex that originates in the psyche or unconscious; under this logic, only the gender of the object of desire differentiates a homo- from a hetero-sexual (Foucault 1990a; Sedgwick 1990). This model, moreover, construes homosexuality as a subjective phenomenon that does not implicate an individual’s political status. The so-called homosexual agenda in the US—the demand for marriage rights, civil rights protections, the ability to serve in the military, etc.—actually understands homosexuals, in the words of Supreme Court jurisprudence, as a “discrete and insular minority” that requires political protection. Whitman casts comrades, by contrast, as practitioners of a way of life that presupposes and expresses its own radical vision of politics. The “Calamus” cluster in *Leaves of Grass*, after all, was first published in 1860, well before homosexuality’s first documented use in the eighteen-seventies (Foucault 1990a). Whitman therefore occupies, as Peter Coviello puts it, “a peculiar, illuminating place in the American history of sexuality—a dynamic moment extending

from before the codings and coordinations of modern sexuality took hold” (2013, 75). For reasons of anachronism, then, we should not call Whitman or his comrades homosexual; this term was not available to him. But we can contrast his concept of the comrade with the concept of the homosexual in order to challenge the latter’s hegemony.<sup>3</sup>

In challenging this model of homosexuality, my study of Whitman also contributes to the literature on the so-called “anti-social thesis” within contemporary queer theory (see Halberstam 2008). According to this thesis, most often associated with the works of Leo Bersani and Lee Edelman, the critical purchase of queer life comes from its resistance to hegemonic social institutions, but especially the institution of monogamous marriage (Bersani 1995; Edelman 2004). On the other side, many activists have focused primarily on the integration, assimilation, or normalization of queer lifestyles and sought for state recognition of same-sex marriage. My reading of Whitman develops an alternative perspective. It reinforces the queer critique of marriage by revealing the institution to be a radical restriction on permissible touch between individuals. But it does not call for the abolition of marriage altogether. As I will show, Whitman’s queerness is neither militantly negative nor optimistically assimilationist about heteronormative institutions; it is fundamentally indifferent.

In the remainder of this chapter, I begin by briefly distinguishing between comrades as Whitman presents them in his prose from comrades as he envisions them in his poetry. From there I move into a close reading of selected poems from “Calamus.” In the next section, I consider Whitman’s cosmological vision by turning to select passages

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<sup>3</sup> Brief moments of queer resistance—e.g. the gay liberation movement of the late nineteen-sixties and the ACT UP movement in the early nineteen-nineties—have attempted to overthrow the dominance of “homosexuality” as a model (D’Emilio 1983; Crimp 2002). But neither gained enough prominence to overcome the dominance of the model outside of insular subcultures. Mainstream medical, legal, political, and media discourses all work with the concept of homosexuality.

from “Song of Myself” that resonate with the themes of “Calamus.” The penultimate section analyzes and draws out Whitman’s contributions to contemporary queer theory, especially the on-going debate concerning the links between queerness, a commitment to futurity, and the so-called anti-social thesis. The final section contrasts Whitman’s communities of comrades with contemporary accounts of subaltern counterpublics. In sum, Whitman’s poems reveal how routines of touch maintain and transform social formations.

### ***Comrades in Democratic Vistas***

There is an abundance of literature connecting Whitman’s prose as a journalist to his poetry, and these connections are surely significant (Arvin 1938; Erkkila 1989; Reynolds 1995; Warner 1996). But in the case of “Calamus,” I insist, it is important to keep some critical distance between the poetry and the prose so that the poetry can speak in its own terms. In *Democratic Vistas*, Whitman understands comradeship as a necessary supplement to electoral and representative politics. Interpreting the poems in the light of this thesis produces a reading like Jason Frank’s in which Whitman’s goal was “to poetically reshape the way citizens imagined and felt their way into a common democratic people” (2011, 155). Without calling into question this careful reading, I contend that in “Calamus” the touch of comrades can create marginal communities and not just bind together more strongly an already established nation. In order to clarify the stakes of this argument, I will first review the main themes of *Vistas* and then turn specifically to its passages on comrades.

In the opening paragraphs of *Vistas*, Whitman associates the uniqueness of the United States with “the moral political speculations of ages, long, long deferr’d, the



democratic republican principle, and the theory of development and perfection by voluntary standards, and self-reliance” (953). Although he defines democracy as the formal institution of “general suffrage,” he insists that “yet unsuspected Literatures, personalities, and sociologies” (955) will affect “politics far more than the popular superficial suffrage, with results inside and underneath the elections of Presidents or Congresses” (956). Frank has written that “the central problem, as Whitman understood it, was that democracy had not yet found its aesthetic expression, and so there was a tragic disconnection between formal democratic institutions and a culture still invested in forms of feudal hierarchy” (2011, 162). Indeed, Whitman compares literature to the foundation of a house, which itself represents democracy, and stresses that “a religious and moral character [lies] beneath the political and productive and intellectual bases of the States” (956). The spatial metaphor reappears throughout the essay and in perhaps the central passage of the entire work, Whitman declares:

For not only is it not enough that the new blood, new frame of democracy shall be vivified and held together merely by political means, superficial suffrage, legislation, &c., but it is clear to me that, unless it goes deeper, gets at least as firm and as warm a hold on men’s hearts, emotions and belief, as, in their days, feudalism or ecclesiasticism, and inaugurates its own perennial sources, welling from the centre forever, its strength will be defective, its growth doubtful, and its main charm wanting ... some two or three really original American poets ... would give more compaction and more moral identity ... to these States, than all its Constitutions, legislative and judicial ties, and all its hitherto political, warlike, or materialistic experiences. (959)

The literature that Whitman calls for would be “vitalized by national, original, archetypes” (996) and would depict the representative and exemplary personalities necessary for the success of the American democratic project. Whitman explicitly invokes J.S. Mill in calling for “a large variety of character...[and] full play for human nature to expand itself in numberless and even conflicting directions” (953). Whitman’s thesis, then, is that a new national literature, poetry especially, will provide models of

personality so that a strong ethos of individualism and pluralism can spread through American society. Comradeship enters the scene here—as the corrective to aggressive individualism.

Comradeship, Whitman contends in *Vistas*, will provide the “counterbalance and offset of our materialistic and vulgar American democracy” by “giving tone to individual character, and making it unprecedentedly emotional, muscular, heroic, and refined” (1005). Although comradeship is necessary to the functioning of democracy, it remains separate from democracy itself. Whitman furthers the analytical separation between comradeship and politics when he claims that comradeship has “the deepest relation to general politics” and that “democracy infers such loving comradeship, as its most inevitable twin or counterpart, without which it will be incomplete, in vain, and incapable of perpetuating itself” (1006). In both of these phrasings, comradeship figures as the servant of electoral and representative politics. Comradeship relates to politics, but is not itself political. Comradeship corrects and contains individualism so that the latter will not corrupt political institutions, but does not alter the institutions themselves.

In the “Calamus” sequence, by contrast, comrades create their own political institutions, even though those institutions lack anything resembling legislation, voting, or representation, the traditional elements of democratic politics. In the poems, comradeship inaugurates and establishes a new social formation, and the source of its cohesion lies in intimate, physical touch rather than personality and character.

Sheldon Wolin has distinguished between democracy as a set of electoral institutions and democracy as a “mode of experience” based on “the self-discovery of common concerns” (1994). This distinction helpfully clarifies the different conceptions

of comradeship in *Democratic Vistas* and “Calamus.” In the prose essay, Whitman construes comradeship as outside of but still necessary to the maintenance of formal, democratic institutions. In the poems, comrades enact a new mode of relational experience. Poetic license enables Whitman to announce a more radical vision of the political significance of comrades. The mystery of the sudden emergence of Whitman’s unique poetic voice in the eighteen-fifties will probably never be explained, but it might help account for the difference between the “Calamus” poems, whose fundamental structure and content were in place by 1860, and *Democratic Vistas*, written over a decade later after the civil war.<sup>4</sup> Whatever the cause, I find Whitman’s poems to be more fruitful for political thought than his prose.

### **Comrades without Closets**

Betsy Erkkila, David Reynolds, and other Whitman scholars have done valuable historical work contextualizing Whitman’s *oeuvre* and showing how the political debates of his lifetime appeared in and informed his poetry (Erkkila 1989; Reynolds 1995). But just as it is possible to use historical work to read politics *into* Whitman’s poetry and view the poet as a receptacle for the ideas of his time, it is also possible to construct a theory of politics *out of* Whitman’s poetry and treat the poet as a theorist in his own right. I therefore proceed, in this instance following Kateb, based on the premise that Whitman’s poetry can be read as political theory.

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<sup>4</sup> C.K. Williams captures very well the mystery of Whitman’s transformation: “The new way of composing must have come to him all at once.... There are very few signs before the 1855 edition that this great thing was about to occur.... And, most important, we don’t know where his *music* came from; though there are isolated lines in the notebooks that offer clues, we’ll never really know when he first fully intuited, and heard, and knew, that surge of language sound ... which was to become his medium” (2010, 2–3).

The opening poem of the “Calamus” cluster, entitled “In Paths Untrodden,” announces the poet’s goal of promoting comradeship, characterizes that enterprise as radically new, and foreshadows the crucial claim that comrades, above all else, relate to each other through touch. Like many of the poems in the sequence, “Paths” employs a strategy of rhetorical suspense so that the major thrust of the poem is not revealed until the final lines (Vincent 2000). In the concluding lines of “Paths,” the speaker announces the purpose of both the individual poem and the cluster as a whole: “To celebrate the need of comrades” (268). This “need of comrades,” importantly, can refer both to the need that comrades feel for each other and to the world’s need of comrades. The poet celebrates comrades themselves and the necessity of their existence. In her pioneering and fundamental work, Eve Kosofsky Sedgwick has called for “a strong, explicit, *erotically invested* affirmation of some people’s felt desire or need that there be gay people in the immediate world” (1993, 164). Whitman offers in this poem, I believe, a clear instance of what Sedgwick seeks. In other words, Whitman ends the first poem of the sequence by announcing its “gay-affirmative” purpose. For Erkkila, he creates “an affirming language of erotic passion and love between men” (2011, 116). Unlike the medical discourses categorizing same-sex desire as an aberration needing to be cured and also unlike the contemporary philosophical discourses claiming that same-sex desire should merely be tolerated, Whitman insists that same-sex intimacy should be promoted and encouraged.

In the first lines of the poem, however, the poet locates himself “In paths untrodden / In the growth by the margins of pond-waters” (268). Although an untrodden path at first seems paradoxical, metaphorically the paths have been formed in the mind of

the poet but not yet explored or walked by anyone else. The invocation of “the growth” at the poet’s feet reinforces the theme of novelty, calling to mind young plants that have recently sprouted. The growths could even refer to the poems themselves; Whitman often analogized his poems to plants and entitled his book, after all, *Leaves of Grass*. The “margins of pond-waters” are liminal spaces; they straddle two worlds, the aquatic and the terrestrial, just as the poet straddles the new world of comrades and the old world of husbands, sons, and brothers. By setting the poem in “this delicious ninth month my forty first year” (268), moreover, the poet does not refer to September but further echoes the theme of novelty by invoking the month of birth (Erkkila 1989, 180). The opening lines of the poem, then, point to the novel character of the poet’s celebration of comrades.

Here in his marginal spaces, the poet continues, he has “Escaped from the life that exhibits itself,” the public life lived in front of and geared towards others. In “this secluded spot” he is free from the influence of “all the standards hitherto publish’d” that could govern a life (268). The poet has access to a special and new knowledge, for there “standards not yet publish’d” become “clear to” him (268). Specifically, the poet is free from the influence of “profits, pleasures, conformities” (268). He discerns new moralities and standards of conduct not yet endorsed by his contemporaries. The standards Whitman references can be the new aesthetic standards that govern his poetic project as well as the moral standards of conduct beyond those provided by capitalist, utilitarian, and Victorian social norms. As Michael Moon argues, “Whitman was always involved in a dual project of both cultural revision ... and literary revision, ... rewriting notions of what a literary text may be” (1991, 6). The comrades celebrated by the poet follow norms and values they enact themselves, much as Whitman’s verses enact their own rhythm. Whitman,

then, implies that the spread of comrades would help resist and challenge the dominant ideologies of his time.<sup>5</sup>

After mentioning new standards, Whitman introduces his crucial term—comrade. The poet declares: “the soul of the man I speak for rejoices in comrades” (268). Whitman’s choice of the word comrade is worth commenting upon. Comrade in the socialist and communist usage as a title is attested in English only in 1884 and after, almost twenty-five years after Whitman first used the word. Etymologically, a comrade is one with whom a bed or bedroom is shared. Comrades share a *camera*, a bedchamber (Stein 1967). The closest contemporary, English synonym is probably bedfellow. In *Moby-Dick*, for example, Ishmael refers to Queequeg as his comrade after they have shared a bed for a night and performed the latter’s pagan marriage ceremony (Melville 2001, 64).<sup>6</sup> Although the word comrade was primarily used in military contexts, Whitman expands the discursive reach of the term considerably. For him, as we will see, a comrade is not a member of one’s biological or marital family, but a friend or acquaintance of circumstance.

Expanding on the theme of seclusion, the poet indicates that he receives clarity about comrades “Here by myself away from the clank of the world, / Tallying and talk’d to here by tongues aromatic” (268). The audible “clank” of publicity and industry is replaced by the aromatic “tongues” of the woods, with “tongues” signifying languages, the oral muscle, and the smells of pond-waters. Although the speaker professes to be

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<sup>5</sup> This goal of Whitman closely approximates what Berlant and Warner have called “queer world-making” (Berlant and Warner 1998).

<sup>6</sup> After Queequeg and Ishmael share a pipe, Ishmael remarks: “He seemed to take to me quite as naturally and unbiddenly as I to him; and when our smoke was over, he pressed his forehead against mine, clasped me round the waist, and said that henceforth we were married; meaning, in his country’s phrase, that we were bosom friends; he would gladly die for me, if need should be” (Melville 2001, 57). Note that the marriage ceremony concludes with the touching of foreheads.

alone, his diction hints that others are present with him as voices and shades. The poet, moreover, claims that in his “secluded spot,” he is “no longer abash’d” (268) of his desire for comrades. In the closing lines, the poet describes comrades as practitioners of “manly attachment” and “athletic love” (268). These phrases can be read as euphemisms for genital sex between men, but they can and should also be read as descriptions of a way of life founded upon touch. The poet does indeed visualize comrades in highly masculine terms, but he does not connect masculinity with power, domination, or control. Instead, the speaker emphasizes not manly independence, but “manly attachment,” and valorizes not athleticism itself, but “athletic love.” In each case, the emphasis is on touch and physical connection, not the assertion of authority. Viewed in its entirety, the poem indicates that Whitman is trying to develop a new and radical conceptual apparatus or *dispositif*—his “paths untrodden”—for promoting a distinct kind of intimacy.<sup>7</sup>

It is possible to read these lines as Whitman’s “coming out” as a homosexual. A tradition of Whitman criticism in the nineteen-seventies did so explicitly. Robert K. Martin claims that Whitman “wrote a large part of his poetry directly out of his own sexual conflicts and fantasies, and he used his poetry to convey the news of his homosexuality to his readers” (1975, 80). Joseph Cady, building on Martin’s analysis, contends that “Whitman’s chief problem in *Calamus* is to invent a way of speaking affirmatively about a subject that his popular audience considered literally unspeakable and that his general culture gave him no positive way of understanding, a problem gay

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<sup>7</sup> Crucially, comrades need not be *male*. Although Whitman’s imagery focuses on the male body, in a few places throughout his poetry he declares that women can be comrades as well as men. In “To a Stranger,” for example, he writes that “You must be he I was seeking, or she I was seeking” (280). More importantly, though, Whitman never gives a reason to exclude women, even if he rarely represents them in his images. More significant than gender to comradeship is the common, intimate touch that exceeds the bounds of permanent, monogamous marriage. Whitman himself might not have seen the need to include women in his vision of comrades, but we need not follow him on this point.

people continue to face even under today's changing conditions" (1978, 6). Cady emphasizes the language of homosexual desire and focuses on Whitman's attempt to name the experience of this desire. But Cady, like Martin, by eliding the historical difference between Whitman and "gay people today," presupposes their equivalence. This reading, moreover, cannot stand in the wake of historical work emphasizing the multiplicity of concepts for understanding same-sex desire that circulated both in Whitman's time and in our own.<sup>8</sup>

Michael Lynch examines the connections between Whitman's understanding of his own desire and his interest in phrenology, writing that "Whitman was more eager to set Adhesiveness—the manly love of comrades—over against Amativeness—marriage and the family—as a basis of social organization" (1985, 92). Lynch, however, connects Whitman's phrenology with psychology, suggesting that Whitman's terms anticipate the psychological theories of the early twentieth century. These studies, then, anachronistically understand Whitman as "a homosexual," as a member of the "species" that Foucault shows did not exist when Whitman began to write about comrades.

M. Jimmie Killingsworth, in particular, provides the most representative example of this psychological interpretation of Whitman. Although he cites Foucault and tries to avoid anachronism, Killingsworth still inscribes Whitman within the medical and psychological model of homosexuality and separates comradeship from proper political activity. One sentence in particular gathers together all of these elements: "in the 'Calamus' poems, Whitman developed a language and the rudiments of a *psychology* by which *homosexuals* could be *brought to self-awareness* and by which same-sex

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<sup>8</sup> There is a substantial literature on the problem of anachronism in the history of homosexuality, beginning, perhaps with Foucault (1990a). See especially Halperin (1990); Sedgwick's critique thereof (1990); and Halperin's response (2002). For a summary and analysis of this debate, see Chambers (2009, 69–73).



friendship could form the *basis for political action*” (Killingsworth 1989, 97, emphasis mine). The claim that homosexuality can be brought to self-awareness assumes that there is a stable, trans-historical essence of homosexuality that the poet, and others, simply have to notice and that this essence lies in the human psyche. And just as significantly, friendship for Killingsworth leads to or makes possible some other, future political action. I insist, against both of these claims, that Whitman constructs, rather than notices or becomes aware of, his need for comradeship and that for Whitman same-sex friendship was itself political action, not the basis for future action.<sup>9</sup>

I find in “In Paths Untrodden,” however, compelling evidence against inscribing Whitman within or coming out of the closet. To say that Whitman comes out in the poems would imply anachronistically and incorrectly that he was identifying himself with an already existing and delimited category of “the homosexual.” But as the first several lines of the poem suggest, Whitman understands himself as assembling and constructing a new category, not as revealing an “open secret” in terms already prescribed by the social order. He does claim in the penultimate line to “tell the secret of [his] nights and days” (268), but the secret he references is not the secret of his inner (sexual) identity kept hidden from others. I read “secret” here as a key to understanding what the poet has been doing during “his nights and days” in the sense of a “secret to making the perfect loaf of bread.” The poet’s secret ensures exclusivity, not invisibility. In a poem later in the sequence, “Behold this Swarthy Face,” the poet self-identifies not as an invert or sinner, but as a comrade and “a natural and nonchalant” person (279). The poet is alone

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<sup>9</sup> Whitman, of course, relied on already existing discourses surrounding masculinity, sentimentality, and phrenology to build his concept of comrades. Nonetheless, on my reading of “Paths,” the poet figures his concept as new and unprecedented.

and by himself, then, because he is forging new paths for his followers, not because he heroically and individually comes out of the closet.

In the third poem of the sequence, “Whoever You Are Holding Me Now in Hand,” the poet claims that although anyone can become a comrade, actually to do so is difficult and potentially dangerous. Becoming a comrade, the poet insists, does not involve simply becoming aware of some psychic desire but rather requires embracing a new form of life. The very title of the poem implies that anyone could be reading it and therefore that anyone could potentially become a comrade, whether of Whitman or of any other person. Indeed, there is even a suggestion of the equivalence between holding hands and holding *Leaves of Grass* itself in one’s hand. To become a comrade, however, is not easy. The poet warns his potential comrades that in order to receive his embrace “you would have to give up all else ... your novitiate would be long and exhausting, / The whole past theory of your life and all conformity to the lives around you would have to be abandon’d” (270). A comrade, especially one in 1860, commits to a way of life that requires unlearning the ways of his contemporaries that were presumably learned from childhood. Whitman sees in comradeship an alternative to the dominant standards of “profits, pleasures, conformities.” Comrades differ from their contemporaries, then, not because of the sex of their objects of desire (as homosexuals are said to differ from heterosexuals), but because of the ethos that governs their life (see Blasius 1992). The imperative that one start an entirely new life implies that one cannot be both a comrade and a (heteronormative) husband; the poet thus proclaims that he is “the new husband” (271).

But once the “novitiate” is complete, the poet tells us, “Here to put your lips upon mine I permit you / With the comrade’s long-dwelling kiss” (271). The long-dwelling kiss creates and symbolizes the presence of comrades much like the pond waters and the calamus leaf. The kiss, however, does not necessarily have to be between lips; the comrade’s kiss, unlike a conventional kiss, requires only some form of touch, “For thus merely touching you is enough, is best” (271). The kisses of comrades symbolize not just cheesy affection, but the bond of touch, i.e. Sympathy (see Bennett 2014).<sup>10</sup> The kisses index and strengthen a process of absorption, connecting and exchanging the atoms belonging to each participant (more on absorption later). In sum, the poem serves as evidence that Whitman conceives of comrades outside of the dominant social formation but with the potential to reform it radically.

### **Revising “Calamus”**

Whitman published the “Calamus” cluster for the first time in 1860, but in the subsequent editions, he rearranged some of the poems, deleted some, and added others—just as he did for the entire collection with each new publication. These numerous revisions helped multiply and pluralize the already numerous themes and arguments of the poems. On one point in particular the poems are especially ambiguous: do comrades value separation from or assimilation with the dominant social formation? Erkkila writes that “the ‘Calamus’ poems are Janus faced, expressing a separatist impulse toward a private homosexual order at the same time that they invoke a national and global community of democratic brotherhood” (1989, 179). As he revised “Calamus,” however, Whitman

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<sup>10</sup> For a discussion of the importance of sympathy in nineteenth-century American literature, see Crain (2001).

largely deleted the nationalist and conventionally political language and favored instead the language of separatism. Nonetheless, these revisions did not remove the fundamental indifference of the poem about comrades' relationship to the dominant social formation. Rather, the deletions enhanced the cluster's indifference by removing some dispositive language favoring political assimilation.

One poem in particular was prominently featured in 1860 but scaled down dramatically by 1881, with some of its most provocative social order and assimilationist language moved to other clusters in *Leaves of Grass*. Originally entitled only "Calamus 5" but later titled "Over the Carnage Rose Prophetic a Voice" after its transfer to another cluster, the poem invokes the classical social order problem very explicitly. Alone among the poems of the cluster it addresses itself to political institutions and begins with the apostrophe "States!" (Whitman 2011, 49).<sup>11</sup> The poet then asks the States, "Were you looking to be held together by lawyers? / Or by an agreement on paper? or by arms?" In the next stanza, he provides a predictably negative answer: "Away! / I arrive, bringing these, beyond all the forces of courts and arms, / These! To hold you together as firmly as the earth is held together" (2011, 49). Presumably with reference to the looming conflict between North and South, the poem juxtaposes states which the poet hopes comradeship can draw back together: "One from Massachusetts shall be comrade to a Missourian, / One from Maine or Vermont, and a Carolinian, and an Oregonese, shall be friends triune" (Whitman 2011, 50). The poet insists that the ascendancy of comrades will be complete when "it shall be customary in all directions, in the houses and streets, to see manly affection" and when "the most dauntless and rude shall touch face to face lightly" (2011,

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<sup>11</sup> Other addressees in 1860 include "whoever you are holding me now in hand"; "bards of ages hence"; "you"; "O drops of me"; "who is now reading this"; "city of my walks and joys"; "passing stranger"; and "Earth."

50, 51). The last major line to be removed confirms the social order reading and eerily anticipates Weber's famous image of the iron cage, although with a nearly opposite valence: "These shall tie and band stronger than hoops of iron, / I, extatic, O partners! O lands! henceforth with the love of lovers tie you" (2011, 51). These sections, like *Democratic Vistas*, construe comradeship as the necessary supplement to electoral institutions (the States). The final edition of the poem, however, reads quite differently. In making this claim I am not suggesting that Whitman improved the poems; rather, I detect a consolidation of a primary theme or argument of "Calamus."

As it appears in the 1881 edition, the poem is addressed not the States but to "You, O Democracy." The poet invites Democracy to come with him as he traverses the world, for on its behalf he "will make the continent indissoluble" (272). The word "indissoluble" supports the social order reading of the cluster; comradeship, the argument goes, would hold a society together that a civil war had recently torn apart. Jason Frank skillfully pursues this line of argument, writing that "Whitman's image of promiscuous citizenship was his way of responding to a familiar dilemma in democratic theory: how to affectively bind citizens together as a self-authorizing people while mitigating the violence done to plural constituencies" (2011, 156). But the word "continent," especially its distinction from nation or country, sustains an even bolder reading. For the poet, comradeship has the power within it to hold an entire continent, perhaps the entire world, together. The political institutions of comrades supersede older polities that are rooted in delimited territories; they have the potential to establish democracy not merely in one nation, but in an entire continent, thereby making national boundaries obsolete.

The poet continues and claims that he “will make divine magnetic lands, / With the love of comrades, / With the life-long love of comrades” (272). The magnetism of the lands draws comrades together with the power of a force of nature.<sup>12</sup> The magnetic lands populated by comrades will be “indissoluble” because comrades are drawn to the each other like magnets. Bennett would refer to this bond as a sympathetic connection (2014). Their touch, the poet hopes, overcomes and resolves other disagreements or conflicts between them. The poet thus proclaims his intention to “make inseparable cities with [comrades’] arms about each other’s necks.” The core idea of this poem expands upon and extends the notion that *touch* constitutes, preserves, and fuses a polity; the city of comrades is “inseparable” (272). Comrades are united by touch, not by shared self-interest, not by their equivalence as individuals, nor by their formal citizenship in a nation-state. Touching fuses individuals; it is not simply epiphenomenal or indicative of a primordial unity. For Whitman, the affective connection established by touch influences beliefs and ideas supposedly chosen by a free and willing subject. Frank notes that “for Whitman it was not enough that democratic egalitarianism be conceptualized as a formal principle; it must be further inscribed in the flesh” (2011, 162). Common touch is thus more important and powerful than “agreements” or “arms” (272). And as I will discuss below, the effectiveness of touch as a connector for Whitman is tied both to his materialist vision of the cosmos that is expounded most clearly in “Song of Myself” and to his concept of sympathetic bodies that can exchange affects with others through touch and sight.

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<sup>12</sup> See Reiss for a discussion of Whitman’s encounter with and endorsement of theories of animal magnetism (1963).

## Comradeship and Politics

In the poem “I Hear It Was Charged Against Me,” Whitman further elaborates on the nature of a community of comrades while adopting an indeterminate position about whether comrades supplement or replace the dominant order. Responding to the charge that he “seeks to destroy institutions,” the poet declares that “really I am neither for nor against institutions” (281). He could have any number of institutions in mind, including but not limited to the institutions of marriage, the family, inviolable personhood, and property, or to such institutions as parties, legislatures, and churches. He neither endorses nor seeks to destroy them. Whitman’s indifference to bureaucratic, partisan, and electoral politics is confirmed in another “Calamus” poem where the speaker confides that “When I heard at the close of day how my name had been received with plaudits in the capital, still it was not a happy night for me that follow’d” (277); the poet is happy instead when “I thought how my dear friend my lover was on his way coming” (277). Comradeship means more to the poet than governmental politics in Washington D.C.; the poet remains indifferent to the state.<sup>13</sup>

Back in “I Hear It Was Charged Against Me,” the poet offers some of the most important lines in the entire cluster, writing that he will establish “without edifices or rules or trustees or any argument ... the institution of the dear love of comrades” (281). Each of the mechanisms of connection that Whitman rejects is significant and widens the divide between comradeship as it is described in “Calamus” and *Democratic Vistas*. The institution of comrades is not a physical building (“edifice”), it is not a set of laws (“rules”), it is not a relation defined by hierarchy, dependence, or representation

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<sup>13</sup> See Martel’s essay for a more thorough discussion of Whitman’s indifference (2009). See Bennett for a discussion of Whitman’s affects of non-chalance and insouciance (2011).

(“trustees”), and it is not based on persuasion, communication, or philosophy (“argument”). It is created and fused by touch (“dear love”). For Whitman, importantly, the “institution of the dear love of comrades” serves the cause of democracy, not anarchism. He remains skeptical of parties, legislatures, and bureaucracies, but he does remain committed to some form of institutional politics. He finds politics in the act of touch, not in the rejection of all rule.

In the poem entitled “I Dream’d in a Dream,” Whitman explicitly invokes a political vocabulary by calling the community of comrades a “city of Friends” (284). Citizens of the United States of the present are rights-bearing and autonomous individuals, but citizens of the United States of the future will be touching comrades. It is significant that Whitman capitalizes Friends; he suggests that a Friend is a distinct type of citizen. And unlike an individual, a friend cannot exist in the singular—hypothetically or empirically. Whitman’s understanding of friendship echoes the models of Aristotle and Emerson, but departs from them in crucial ways. Aristotle also argues that friendship engenders the concord necessary to hold a city together (2001, 1155a, 1161a; see Ward 2011, 4, 11), but his friends must be equals, virtuous, and most importantly, rare (2001, 1156b, 1158a). Comrades need not be equal or virtuous, and one can have many comrades; Whitman certainly did. Emerson emphasizes the values of truth and tenderness and conceives of friendship primarily in communicative terms (Emerson 1987; see Scorza 2004). Comrades are united not by talk, but some sort of physical embrace.

The so-called city of Friends, furthermore, contains relationships and roles that differ from those available in our own heteronormative order. In “Among the Multitude,” the poet rejects the inevitability, necessity, or superiority of the opposite-sex,



monogamous, childbearing relationship. He does not indict or find fault in that relationship, but questions its ability to satisfy and contain the panoply of human desires. The poet suggests that comrades exist apart from the order of what Samuel Chambers calls the “sanguinuptial” model of the family defined by relationships of “blood and marriage” (2009, 137; see also Coviello 2013). The poet declares: “I perceive one picking me out by secret and divine signs, / Acknowledging none else, not parent, wife, husband, brother, child, any nearer than I am, / Some are baffled, but that one is not—that one knows me” (286). The speaker and his comrade are just as close if not closer to each other than to their respective sanguinuptial families. Comrades, we might say, have their own models for intimate relations that supplement biological and marital ties. The “secret and divine signs” allow potential comrades to discern and recognize each other, for their relationship can “baffle” those who only seek or imagine themselves in sanguinuptial relationships. The poet finds comrades walking in public places while using looks and glances (“faint indirections”) to identify possible partners.

This distance from the childbearing, monogamous couple signals Whitman’s radical break from the tradition of Western political thought in which almost every classical author—from Aristotle to Locke—argues that marriage constitutes the original relationship on which all subsequent societies and polities are built.<sup>14</sup> Whitman, then, understands comradeship, as Aristotle did the reproductive marriage, as the base of a political regime itself. Whitman emphasizes the equality of comrades against the

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<sup>14</sup> Aristotle writes: “out of these two relationships [of rule] the first thing to arise is the family.... The family is the association established by nature for the supply of men’s everyday wants” (1988, 2). For Locke, “the *first Society* was between Man and Wife, which gave beginning to that between Parents and Children” (1988, 319). Rousseau is equally insistent: “the most ancient of all societies and the only natural one is that of the family.... The family is, then, if you will, the first model of political societies” (1997, 42). Even Marx and Engels in their famous but pseudo-text *The German Ideology* echo this sentiment: “the family, which to begin with is the only social relationship, becomes later, when increased needs create new social relations and the increased population new needs, a subordinate one” (1978, 156).

hierarchy of husbands and wives, parents and children. And in describing the anonymous encounters of comrades, the poet implies that comrades are not necessarily monogamous. Their relationships are light, fleeting, and multiple, but as a result, that much more effective at “making inseparable” the city of Friends. As the poet writes at the end of “A leaf for Hand in Hand,” “I wish to infuse myself among you till I see it common for you to walk hand in hand” (284). The more encounters and relationships comrades have, the more likely they are to usher in a new age of democracy. The proof of this claim emerges out of Whitman’s materialist image of the cosmos, to which I turn in the next section.

It is important to emphasize, in addition, that the comrade’s touch does not inexorably connote or lead to genital sex. It would be difficult to isolate in any of the “Calamus” poems a stable or clear distinction between intimate or sexual and merely physical touch. Malcolm Cowley’s provocative reading that Whitman endorsed a “very strange amalgamation ... between cocksucking and democracy” (quoted in Erkkila 1994) contains a kernel of truth, but oversimplifies Whitman’s vision. As Sedgwick explains,

the answer to the question ‘what difference does the inclusion of sex make’ to a social or political relationship is—it varies.... It is clear that there is not some ahistorical *Stoff* of sexuality, some sexual charge that can be simply added to a social relationship to ‘sexualize’ it in a constant and predictable direction, or that splits off from it unchanged (1985, 6).

In other words, Whitman’s comrades are not otherwise standard American men who happen to be having sex with each other, but are radical political actors themselves. Just where genital sex figures into the activities of comrades is neither clear, nor, in the last analysis, that important. Whitman’s comrades might have sex with each other, and their sexual acts would certainly push against and challenge the asserted natural goodness of reproductive sex, but more important than sex is the broader, more mundane experience of touch. For Whitman, there is no neat dividing line between sexual and non-sexual

touch. Comrades' bodies touch in one way or another, but the site of contact can be the hands, the mouth, the arms, the shoulders, etc. As Whitman says in "Song of Myself," "Welcome is every organ and attribute of me ... Not an inch nor a particle of an inch is vile, and none shall be less familiar than the rest" (190-1). Neat boundaries between sexual and non-sexual body parts or acts cannot be maintained. Peter Coviello puts it nicely when he argues that Whitman refused "to circumscribe sexuality in any definite set of acts or relations" (2001, 100–101).

### **Cosmological Absorption**

Several themes that emerge elsewhere in *Leaves of Grass* buttress this reading of the "Calamus" poems. More specifically, in "Song of Myself" Whitman outlines the underlying cosmology in which touch has the radical power the poet constantly ascribes to it. Most readings of the poem naturally focus on the self that the poet creates. I focus, by contrast, on the poet's descriptions of the cosmos at large and what Bennett has called Whitman's depiction of "material vitality" (2011, 135).<sup>15</sup> The cosmology of absorption espoused by Whitman reveals why touch is important for comrades and the city of Friends. Touch enables the exchange and mutual absorption of atoms, emotions, affects, and sympathy between the participants. The process of mutual absorption engenders the magnetism of comrades.

For Whitman the primordial or fundamental activity of the cosmos at large is the process of absorption. All things absorb and are absorbed in turn by all things. For Whitman, absorption describes the relations not only between things, but also between

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<sup>15</sup> My account departs slightly from Bennett in emphasizing absorption over sympathy, but the implication of both readings is the same: entities in the cosmos are porous and interdependent rather than isolated and autonomous.

poetry and the world. The boundaries between objects, words, forces, poets, and people are quite porous. Whitman therefore proposes that as a poet he is absorbing the world around him. He writes in “Song of Myself,” for example, that “In me...not a person or object missing, / Absorbing all to myself and for this song” (199). These two lines reveal Whitman’s core desire: to absorb the world around him into himself and translate it into poetry. In the poem “Out of the Cradle Endlessly Rocking,” the speaker describes his activity as “peering, absorbing, translating” (389) the world around him. These three words provide a nice formula for Whitman’s avowed creative process. But even as Whitman the poet is absorbing the world around him, he hopes that the favor will be returned. Indeed, for this reason he concludes the 1855 Preface to *Leaves of Grass* with his thesis that “the proof of a poet is that his country absorbs him as affectionately as he has absorbed it” (26). The language of absorbing bodies reappears in crucial passages throughout *Leaves*.

The opening to “Song of Myself” echoes the importance of the theme of absorption: “I celebrate myself, and sing myself, / And what I assume you shall assume, / For every atom belonging to me as good belongs to you” (188). Although “assume” primarily means to accept for the sake of argument, its more etymological meaning (*ad-sumere*) is to take up, adopt, use—or more figuratively to absorb. When the poet invokes the language of atoms, we can take him fairly literally, understanding the atoms as the most fundamental units of matter. Kateb reads the atom as a symbol or representation of potentiality (Kateb 2011, 23), but I read the atom as the actual site of connectedness of the universe. Noble argues, convincingly, that Whitman’s understanding of atoms comes

out of Lucretian materialism (2009).<sup>16</sup> “Belongs,” however, is also a key word in the stanza. Before I was born, my atoms once belonged to another organism and when I die they will belong to another once again. Whenever I touch something, atoms are exchanged whether in the form of dead skin cells or transmitted affects. By belong, then, the poet means: goes together with, can identify with, or most importantly, can absorb and be absorbed by in turn. Atoms belong equally to everyone insofar as they are constantly exchanged with each other.

The imagery of section 2, which centers on breaths, perfumes, smells and atmospheres reinforces the significance of absorption. The section begins by contrasting “houses and rooms [that] are full of perfumes” with “the atmosphere [that] is not a perfume, it has no taste of the distillation, it is odorless” (189). The poet then proceeds to catalogue the numerous ways in which his body absorbs its surroundings and gives something back in return:

The smoke of my own breath,  
Echoes, ripples, buzz’d whispers ...  
My respiration and inspiration, the beating of my heart, the passing of blood and air  
through my lungs,  
The sniff of green leaves and dry leaves ...  
The sound of the belch’d words of my voice loos’d to the eddies of the wind. (189)

Once again, the poet describes his own attempt to absorb the world around and translate it into poetry. This poetic process, like all processes in the cosmos, proceeds by means of absorption.

A few more moments in “Song of Myself” support the idea that touch generates connection, magnetism, and is imbued with political significance. In section twenty-

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<sup>16</sup> Noble connects Whitman to Lucretius through the poet’s reading of and fascination with the chemist Liebig. Additionally, he shows how “Sun-Down Poem”—later entitled “Crossing Brooklyn Ferry”—incorporates Lucretian notions of atoms, flows, and material subjectivity. I will return to the question of Whitman’s atoms in the final section.

seven, the poet writes that “Mine is no callous shell / I have instant conductors all over me whether I pass or stop, / They seize every object and lead it harmlessly through me. / I merely stir, press, feel with my fingers, and am happy, / To touch my person to some one else’s is about as much as I can stand” (215). The “instant conductors” of the poet’s body convey the sparks of touch between the poet and his comrades. They are the mechanisms of absorption and the circuits that relay forces of sympathy. The poet’s invocation of conductors, moreover, casts the body as a receiver and transmitter of electric currents. In these lines, however, Whitman does not limit the powers of touch to human interaction only. The poet’s body seizes “every object” and not just human hands or faces.

Whitman’s images of decomposing bodies and the life cycle of organic matter further exemplify how the cosmos is characterized by absorption. Whitman himself, like Marx, was an avid reader of the chemist Justus von Liebig (Reynolds 1995, 240), who, as explained previously, is credited with the discovery of plant fertilizer and with revolutionizing the fields of plant and animal nutrition. Liebig argued that minerals along with dead organic matter became a part of the soil in order to be reabsorbed by living organisms, especially plants. By eating these plants, humans and animals absorbed the same matter. All life was therefore part of a large, ever-repeating recycling of atoms. Whitman invokes this image of matter in three important passages of “Song of Myself.” In section 6, responding to the child who asks “What is the grass?” the poet declares that grass may “transpire from the breasts of young men” (192). Furthermore, in section 49, the poet states: “And as to you Corpse I think you are good manure, but that does not offend me” (245). In both lines the poet re-signifies death as the source for new life rather than the end of a finite sequence. In the final section, the poet tells his reader (“Listener

up there!), “I bequeath myself to the dirt to grow from the grass I love, / If you want me again look for me under your boot-soles” (247). This insight into the nature of organic matter allows the poet to mock and defy death: “I know I am deathless ... I laugh at what you call dissolution, / And I know the amplitude of time” (206-207). In a cosmos where matter is continually absorbed and re-absorbed, death is an illusion.

And lastly, Whitman suggests on numerous occasions that touching and mutual absorption does not just occur between humans, but between objects, things, plants, animals, etc. In section 31 of “Song of Myself,” the poet describes all entities in the cosmos on equal terms: “I believe a leaf of grass is no less than the journey-work of the stars, / And the pismire is equally perfect, and a grain of sand, and the egg of the wren ... And a mouse is miracle enough to stagger sextillions of infidels” (217). The poet does not stop at what are conventionally thought of as organic and living entities. He proceeds in the next stanza to exclaim “I find I incorporate gneiss, coal, long-threaded moss, fruits, grains, esculent roots” (217). The use of the verb incorporate is noteworthy; the poet’s material self includes the atoms that could just have easily belonged to the dirt. For as he suggests in section 47, “the nearest gnat is an explanation, and a drop or motion of waves a key” (243). Relations of touch can create political communities where humans rarely if ever appear or participate.

### **Whitman’s Queer Politics of Touch**

More than twenty-five years of queer theory have exposed the numerous problems, paradoxes, and contradictions associated with the model of the homosexual. Most importantly, this conceptual model isolates and singles out the sex of the object of one’s desire as the single most important element of that desire. For Whitman, however, the

most important characteristic of comrades is not that they are men who desire *men*, but that they touch other men outside of any marital or familial bond. A comrade does not necessarily have an enduring desire for any particular object; it matters very little why comrades touch or what motivates them to do so. Whitman, then, has a very queer theory of intimacy.

Because of Whitman's commitments to certain visions of masculinity, his occasional racism, and his ringing endorsements of patriotism and nationalism, he is generally seen as a proponent of the heteronormative order.<sup>17</sup> I argue, instead, that Whitman's poetry imagines a robust alternative to this order. Whitman's poetry, then, should be understood as queer, against some recent contrary interpretations. David Halperin, for example, contends that Whitman's comrades are the antithesis of the queers celebrated by Bersani, Warner, and others. Halperin writes:

A stubborn, cherished image of gay love is chastely embodied by a 'pair of boys playing catch.... Lazy and silent on a spring morning, in perfect communion.' [It goes along with] a model of gay sex as a wholesome, easygoing masculine exchange among friendly, mutually respectful teammates, and ... of a gay comradeship at once sexual and fraternal, inclusive and tender, virile but non-judgmental, happily free of roles, hierarchy, and sexual difference. That classic, utopian vision—as old as Walt Whitman ... did not long survive unscathed. For in 1990 came the 'queer' moment, with its militant vindication of deviant sex and gender styles. (2012, 52–3)

Halperin, despite his otherwise careful and insightful analyses, radically mischaracterizes Whitman's treatment of comrades. Whitman does use masculine imagery that sentimentalizes intimacy between men, but he just as importantly highlights the deviant, radical, and even dangerous elements of comradeship. Whitman clearly and explicitly warns his readers in the "Calamus" poems that his "way is suspicious, the result uncertain, perhaps destructive ... Nor will my poems do good only, they do just as much

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<sup>17</sup> Carver's essay, in particular, challenges charitable readings of Whitman for concealing or brushing over his overt machismo (2011). Coviello stresses Whitman's commitments to nationalism (2001).



evil, perhaps more” (270-271). Indeed, the “Calamus” poem most likely to be cited in support of Halperin’s reading, entitled “We Two Boys Together Clinging,” supports a queer reading as well. The first of the half of the poem, which describes two boys “one the other never leaving / Up and down the roads going...power enjoying—elbows stretching—fingers clutching, / Arm’d and fearless—eating, drinking, sleeping, loving” (282) seems to depict exactly the “easygoing, masculine exchange” Halperin mentions. But the second half of the poem is full of role experimentation, violence, deviance, and subversion. The poet continues: “No law less than ourselves owning—sailing, soldiering, thieving, threatening, / Misers, menials, priests alarming ... Cities wrenching, ease scorning, statutes mocking, feebleness chasing, / Fulfilling our foray” (282). The boys experiment with a variety of deviant masculine roles as sailors, soldiers, and thieves, thereby pluralizing rather than stabilizing any notion of masculinity.<sup>18</sup> While sailors and soldiers are traditionally thought of as masculine, they live marginal lives, separated from landed and civilian spaces.<sup>19</sup> Furthermore, the boys of the poem ignore authority (“no law less than ourselves”) and scorn the laws (“statutes mocking”) even as they provoke and alarm the defenders of the capitalist and Christian moral order (“misers, menials, priests alarming”). They wreak havoc on towns and states (“cities wrenching”) and seek to cultivate lethargy rather than strength or economic productivity (“feebleness chasing”). And lastly, a “foray” is not a playful game of catch, but rather a scouring raid. The two boys, then, pluralize masculinity and engage in various acts of subversion, but very few of their actions are truly wholesome and tender.

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<sup>18</sup> Terrell Carver advocates this kind of pluralization of masculinity in Whitman (2011).

<sup>19</sup> The sailors and soldiers Whitman has in mind, then, seem more like pirates than members of the Her Majesty’s Royal Naval Service.

Juan Herrero-Brasas, like Halperin, concludes that Whitman's "project was one of moral reform, with religion and mystical revelation at its center, as the source of authority—a far cry from the queer perspective. He did not seek to destabilize the nuclei of power; rather, when it came to social morality he was on the conservative side" (2010, 158). Although Whitman indeed understood himself in spiritual terms, it is hard to sustain an interpretation of him as speaking on behalf of power and authority. Whitman the poet, who mysteriously burst onto the scene in 1855, was a vocal critic of Victorian social norms as well as a self-appointed advocate for all who are marginalized or oppressed. He espoused this position clearly and boldly in section twenty-four of "Song of Myself": "Through me many long dumb voices, / Voices of the interminable generations of prisoners and slaves / Voices of the diseased and despairing ... of the deform'd, trivial, flat, foolish, despised ... Through me forbidden voices ... Voices indecent by me clarified and transfigured" (211). The poet claims to channel the voices of the downtrodden and dominated, not of those in power. By speaking on behalf of "long dumb" and "forbidden" voices, the poet explicitly challenges the system of morality invoked and supported by his contemporaries.

Although it would be proleptic to call Whitman homosexual, it is legitimate to call him queer. Because queer is now a political or programmatic term, calling Whitman queer does not require assuming that he is the same as we are today, only that he occupied a similar marginal position against hegemonic norms, whatever they were, that queers claim for themselves today. Thomas Yingling began to pursue this argument, but did not live to finish the work. In a posthumously published, unfinished essay he stated that "Whitman's text finally witnesses to [sic] the fact that utopian schemes are moments

of vision in which is imagined an alternative social organization ... This is achieved through identification with and seeking out a position of marginality from which dominant practices may be critiqued” (1996, 145). I favor a programmatic rather than historicist understanding of queerness that pursues positions of marginality in the way Yingling describes. Whitman explicitly seeks out marginal spaces for comrades, as my reading of “In Paths Untrodden” (emphasizing the line “In the growth by the margins of pond waters”) suggests. Whitman’s comrades act queer, then, insofar as they reject and live outside of heteronormative sexual orders. As Michael Warner explains, “because the logic of the sexual order is so deeply embedded by now in an indescribably wide range of social institutions, and is embedded in the most standard accounts of the world, queer struggles aim not just at toleration or equal status but at challenging those institutions and accounts” (1993, xiii). Whitman’s dissatisfaction with American politics and his attempt to perfect American democracy inform his poetry about comrades and provide strong evidence against reading him as a classical liberal with a progressive vision of politics. Much about Whitman is queer; it is important that we recognize it.

A strand of recent work within queer theory has forcefully insisted that queerness is purely negative and loses its critical force and perspective to the extent that it affirms a particular identity or social order. Leo Bersani has argued against affirmative, redemptive, sentimental, and empowering theories of sex, claiming generally that sex is “anticommunal, antiegalitarian, antinurturing, antiloving” (2010, 22) and more specifically that “self-shattering is intrinsic to the homo-ness in homosexuality” (1995, 110). For Bersani, the critical power of “homos” to reshape politics comes from this negative element of sex, its ability to unsettle and dissolve the self and thereby

necessitate “reconstituting sociality” (1995, 177). Lee Edelman, however, goes even further than Bersani and contends that queerness embodies a “radical challenge to the very value of the social itself” (2004, 6) and to any commitment to “reproductive futurism.” For Edelman, all politics presupposes a commitment to the future, and this future is always represented by the figure or image of the Child in whose name it is protected and secured. “The fantasy subtending the image of the Child,” he writes, “invariably shapes the logic within which the political itself must be thought” (2004, 2). The power of queer sex, then, comes from its inability to produce a child. Queer sex, for Edelman, is the one place free of reproductive futurism, and he insists that it remain so.

The concept of social formations, however, reveals the inadequacy of Edelman’s over-determined, Lacanian conception of the social. According to Edelman, all social life is governed by the logic of reproductive futurism to such an extent that otherwise significant differences between communities become meaningless. Contrary to Edelman’s thesis, my interpretation of Whitman suggests, reproductive futurism predominates only within some social formations. Within these particular societies, reproductive futurism manifests not only in rhetoric and film, as Edelman shows, but also in an ordered regime governing relations of touch, as Whitman detects. Whitman’s queerness does not arise because he stands outside of “the social” in its entirety—there is no such standpoint—but because he stands outside of a heteronormative regime of touch.

Whitman’s queer comrades, then, are not anti-social in the slightest, even as they wrench cities and mock statutes. They create, inhabit, and constantly reconstruct their own social formations. Whitman’s comrades, like those Bersani celebrates, experience “homosexuality without sexuality, desire that is satisfied just by the proximity of the

other, at the most by the other's touch" (Bersani 1995, 121). Furthermore, Whitman offers a vision of queers who maintain a critical and negative relation with heteronormativity but still remain committed to the future. Edelman asserts that politics is necessarily tied to an investment in the future and that futurity is necessarily linked with the image of the Child. If we pay close attention to Whitman's poems, we can see that, contrary to Edelman's conclusions, queers can engage in politics and seek to transform the social order without falling prey to reproductive futurism. Halberstam (2008) chides Edelman for failing to look beyond a white, male archive for his queer sources, but it can be equally said that Edelman also failed to make his white, male archive as large as it could be. Whitman advocates a queer politics in the "Calamus" poems that remains committed to the future, but the image of the Child does not figure into this vision at all. Whitman seeks to cultivate the "United States of the Future" and constantly dreams of the democracy his poems will inaugurate, but this investment in futurity does not preclude his celebration of comrades in the present. Queer theorists, then, can and should attend to Whitman for an affirmative and material theory of politics that recognizes and promotes queer regimes of touch.

Whitman's envisioned polity would be a queer one, I insist, because it exists alongside of formal electoral and representative institutions, constantly unsettling their identity and claimed monopoly on the political. This social formation does not have a stable identity or citizenry, for its boundaries transform as comrades alter their regimes of touch. It would not replace the dominant order, but provide a refuge for those whose styles of touch do not conform to the norm. The spaces of comrades are not public in any conventional sense. The spaces the poet frequents are "escaped from the life that exhibits

itself” (268). If comrades meet within view of the general public, they are often able to hide in plain sight.<sup>20</sup>

According to this logic, twenty-first century, North Atlantic polities are essentially and fundamentally heteronormative not because they privilege the child or because they legally discriminate against gay people (although they do), but because they elevate and promote one regime of touching above all others. Our legal codes both establish and enforce a regime of touch by isolating and enshrining monogamous, permanent marriage and a sanguinuptial model of family; only relations that conform to this model receive legal recognition and protection in the forms of spousal privilege, inheritance, visitation rights, etc. Same-sex marriage, therefore, buttresses and supports heteronormative orders insofar as it perpetuates a model of marriage founded upon a restrictive and supposedly natural regime of touch. Contemporary political discourse often demonizes alternative sexual practices, and almost every politician insists on the “sanctity” of marriage and the reproductive family. Even our codes of citizenship are tied to this model, for citizenship is passed on from parent to child or acquired through marriage. A haptic ethos thus permeates our political and legal institutions—or more generally, our contemporary social formation.

### **Social Formations, Counterpublics, and Regimes of Touch**

From the perspective of political theory, the most significant argument of Whitman’s “Calamus” poems is the thesis that touch, rather than “agreements,” “arms,” or “lawyers” holds a polity together. This thesis has implications for our understandings of both political communities and the kinds of subjects that populate them. Several elements

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<sup>20</sup> Thanks to James Martel for this point.

distinguish Whitman's queer city of Friends from classical city-states and from contemporary nation-states. This polity is delimited neither by territory, by ethnic, racial, or biological identity, nor by imagined forms of belonging. As Jason Frank notes, "Whitman rejected non-aesthetic bases of political attachment, most notably tradition, race, rationality, or interests" (2011, 162). In their place he substituted relations of touch.

In this interpretation of Whitman, I partially follow but partially depart from Peter Coviello's reading. He writes:

For Whitman, nationality consists not in legal compulsion or geographical happenstance but in the specifically affective attachments that somehow tie together people who have never seen one another, who live in different climates, come from different cultures, and harbor wildly different needs and aspirations. To be properly American is thus, as Whitman conceives it, to feel oneself related in a quite intimate way to a world of people not proximate or even known. (2001, 87)

I agree wholeheartedly that for Whitman "specifically affective attachments" rather than laws or abstract notions of territory and citizenship tie together the people of a nation, but I disagree with Coviello's claim that people who "have never seen one another" or who are "not proximate or even known" to each other live in the same polity. A city of comrades is populated by the group of individuals who touch each other. If all of America is to be a city of comrades, all Americans would have to touch each other. Otherwise, there will only be numerous and porous pockets of comrades.

Comrades create polities that exist alongside of dominant social orders and remain indifferent to them, although they might on occasion unsettle or trouble broadly accepted norms. Comrades do not seek complete separatism; their spaces are marginal rather than isolated. Furthermore, the boundaries of these polities of comrades are neither imagined nor territorial. Unlike nation-states bounded by geographical borders, Whitman's imagined city extends wherever its members live and move. Comrades,

however, are not an interest group. They are not united by a common biological identity, ethnic heritage, or some form linguistic uniqueness. Material, physical touch, not an abstract notion of similarity and identity, ties together the members of Whitman's city of Friends. The makeup of a city of Friends changes often; it reaches as far as its citizens reach. Comrades pursue their own ways of life and practice their own forms of politics.

Nancy Fraser and Michael Warner have referred to these kinds of communities as counterpublics (Fraser 1990; Warner 2010). For Fraser, "subaltern counterpublics" are "parallel discursive arenas where members of subordinated social groups invent and circulate counterdiscourses" (1990, 67). These subaltern counterpublics have a dual purpose: they are both "spaces of withdrawal" and "bases and training grounds for agitational activities directed toward wider publics" (1990, 68). As Warner defines the concept, a counterpublic "is not based on a precise demography but mediated by print, theater, diffuse networks of talk, commerce, and the like" (2010, 56). I resist describing Whitman's associations of comrades as counterpublics, however, for two reasons: because Whitman emphasizes touching over talking and because comrades, while they often touch each other in public, often escape the *recognition* of the general public.

Writing in the tradition established by Habermas, both Fraser and Warner understand publics and counterpublics as primarily linguistic spaces created by verbal and written exchanges. Comrades touch each other physically. A case can be made, however, that speaking itself is a form of touch. Hearing someone's words, after all, requires sound waves to strike the eardrum, just as reading a text requires photons to strike the eyeball. On some level, then, reading Whitman's poems—aloud or in silence, although he preferred the former—would itself be an instance of touching. Speech itself



is therefore a subset of touching, different in intensity perhaps, but not different in kind. Provisional support for this admittedly provocative thesis can be found in the 1855 Preface. There Whitman suggests both that “the United States themselves are essentially the greatest poem” (1) and “your very flesh shall be a great poem” (11). Bodies, governments, and poems exist on the same ontological plane. The social formations created by comrades may include or produce the counterpublics that Fraser and Warner describe, but are themselves constituted by touch.

When comrades touch in public, moreover, they often manage to evade the notice of the public at large. Whitman opens the “Calamus” sequence away from the gaze of others, “escaped from the life that exhibits itself” (268). The poet prefers the secluded embrace of his comrade “under the same cover in the cool night” over the “plaudits in the capitol” (276). Even when the poet finds himself “among the men and women the multitude,” he looks for and returns “secret and divine signs” so that his comrades “should discover [him] by faint indirections” (286). In these instances of connection, comrades do not create a discursive counterpublic for sharing ideas, but fashion protean and fleeting social formations or figurations. The touch of comrades occurs in public but is not itself public.

## **Chapter 4. Dietetic Politics: “Eco-Dietetics,” Neoliberalism, and the History of Dietetic Discourses**

Is it possible to eat our way into a new social formation? A growing number of farmers, chefs, and eaters think so. United in their opposition to industrial agriculture, processed food, and pleasureless eating, they have been calling for a new food system centered on fresh, organic, local, and/or “Slow” foods since the 1960s (Belasco 1989; Pollan 2010). This chapter contends that these movements have collectively established a new discourse of food politics that can be termed “eco-dietetics.” By situating contemporary food movements within a larger history of dietary advice, this study both demonstrates that reflections on diet have long been important topics in the history of political thought and contests the increasingly common criticism that the new food movements are disguised forms of neoliberalism. In short, eco-dietetic practices are political insofar as they alter the ways in which a social formation feeds itself.

Scholarship on the subject has already delineated two historical dietetic discourses: the humoral regime that structured European medical thought until the nineteenth century (Jouanna 2012; Nutton 2012; Shapin 2014; Siraisi 1990; Temkin 1973) and the nutritionist regime that replaced it (Pollan 2008; Scrinis 2008, 2013; Shapin 2014). While humoral dietetics had created and investigated humors, and nutritionist dietetics nutrients, eco-dietetics created and investigated as its object of knowledge the effects of eating on the environment, what the Slow Food movement calls the links “between plate and planet” (2015). Though others have described the new food movements as “countercuisine” (Belasco 1989) or as the “food quality paradigm” (Scrinis 2013), eco-dietetics is shown here to be the most appropriate name for what

these movements have collectively become.

Several critics have accused the eco-dietetic movements of abandoning traditional politics in favor of a consumerism which, however self-conscious, is still tied to a capitalist model of markets and thus supports rather than challenges contemporary neoliberalism (Guthman 2008; Lavin 2013). Such critiques have found both academic and public traction. Writing in the *New Yorker*, for example, John Lanchester laments that “if shopping and cooking really are the most consequential, most political acts in my life, perhaps what that means is that our sense of the political has shrunk too far—shrunk so much that it fits into our recycled-hemp shopping bags” (2014). He concludes his jeremiad by emphasizing that “not so long ago, food was food.” Lanchester, however, too hastily confines politics to heroic speech and action. The dietary advice offered by advocates of eco-dietetics implies a new understanding of the ways in which politics permeates dietary practices. According to this understanding, politics happens whenever social formations are actively maintained or reconfigured. By developing new notions of the body, healthy food, moral eating, and the source of knowledge about food, eco-dietetics therefore develops a form of politics that *resists* neoliberalism. This image of politics is not shrunken, but enlarged. If it fits into a shopping bag, it is only because that bag was produced in a particular place, made out of specific components, known as an object within a specific regime governing the production of knowledge, consumed in a unique fashion, and is therefore not “just a bag”—just as food has *never* been “just food.”

### **The Politics of Dietetic Discourses**

From Aristotle to Arendt, political thought has often been hostile to categorizing eating and drinking as political. Scholars who do study eating in such a light usually frame the

political in terms of state policy and focus on dietary guidelines, agricultural policy, and the regulation of food corporations (Nestle 2007; Paarlberg 2013).<sup>1</sup> This state-centered understanding of politics, however, is quite narrow (Connolly 2002; Wolin 2004). The politics of eating exceeds the state, and its history traces the emergence and competition of various dietetic discourses with unique conceptualizations of the body, health, morality, and authoritative knowledge about food. Eating is thus an important and paradigmatic political act. What gets eaten, how, where, when, and with whom—such factors determine what is incorporated into a body, draw eaters into particular communities, and help assemble a network of production that begins on a farm, continues onto a plate, and ends with the return of food to the earth as waste. Political processes enable some eating practices and render others impossible or irrational. But eating practices, in turn, construct particular kinds of bodies and therefore cultivate particular kinds of political subjects. Dietetic routines play a substantial role in the maintenance and alteration of a social formation.

Sociological and anthropological literature supports this description of eating. Norbert Elias has documented the intimate connections between table manners and the social formation of which they are a part, maintaining that “conduct while eating cannot be isolated. It is a segment—a very characteristic one—of the totality of socially instilled forms of conduct. Its standard corresponds to a quite definite social order” (1994, 55).

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<sup>1</sup> Marion Nestle argues that “diet is a political issue” because of the role that government agencies play in issuing nutrition advice, providing agricultural subsidies, and regulating corporations that produce food (2007, 28). Nestle therefore exposes the ways in which “food companies use political processes—entirely conventional and nearly always legal—to obtain government and professional support for their products” (2007, 1). Robert Paarlberg likewise defines food politics as the “competition to shape the actions of government” (2013, 1). He even excludes action not focused on the state from his definition: “if you and I have a personal disagreement over the wisdom of eating junk food, that is not food politics, but if you and your allies organize to advocate new government regulations on junk food, ... the disagreement then becomes food politics” (2013, 2).

The fork's slow spread through Europe beginning in the sixteenth century, for instance, altered table manners not as an instrument of hygiene but as a tool of class differentiation (Elias 1994, 55, 103–5). As Sydney Mintz explains in his study of British production and consumption of sugar, “transformations of diet entail quite profound alterations in people’s images of themselves [and] the fabric of their daily social life” (1986, 13). He shows how the introduction of mass-produced sugar was “closely connected with England’s fundamental transformation from a hierarchical, status-based, medieval society to a social-democratic, capitalist, and industrial society” (1986, 185). These studies confirm that what individual eaters might experience as minor can radically reshape a social formation.

Alimentary politics therefore long predates the nation-state, while food and diet have always been integral, if not central topics in the history of Western political thought. Chad Lavin has recently argued, to the contrary, that a “digestive turn” in political theory first emerged in the nineteenth-century works of Hegel, Marx and Nietzsche as a critique of liberalism and the mind-body dualism it presupposed (2013, 56). What Lavin mistakes for a single “digestive turn” in the nineteenth century, however, was actually a much larger reconfiguration of the meaning of eating, digestion, and incorporation in the North Atlantic culture at large. This transformation did not introduce the topic of digestion into political thought, but instead altered the terms according to which the connections between digestion and political subjectivity were understood. A similar transformation, discussed below, began in the second half of the twentieth century and continues into the present.

The history of dietetics—the art and practice of designing and implementing a

regulated diet in order to achieve a particular goal—reveals that the digestive subject is in fact much older than the disembodied liberal subject. Western European medicine and morality had emphasized the connections between diet and virtue, eating and subjectivity, as early as the fifth century BCE with the circulation of the Hippocratic corpus in ancient Greece (Jouanna 2012; Nutton 2012; Shapin 2003, 2014; Siraisi 1990; Temkin 1973). Almost every thinker had something to say about dietetics. It is the dualism ascribed to Descartes and Locke that was new in thinking about the connections, or lack thereof, between the stomach and the soul. But even Descartes and Locke, despite their reputations as dualists, not only examined the links between the body and the mind in their treatises on diet and medicine but also reflected on the political significance of aliment.

In order to see the political implications of diet, in both early modern and contemporary texts, it is necessary to attend to the lengthy history of dietetic thought. Doing so reveals three historically distinct, dietetic “discursive formations” (Foucault 1972): humoral dietetics, nutritionist dietetics, and eco-dietetics. A style of speaking and acting becomes a discursive formation, for Foucault, by constituting its own unique object of knowledge and giving rise to distinct practices that assume the existence of that object.<sup>2</sup> Discourses, then, not only encompass structured groups of concepts, words, and phrases, but contain and make intelligible “practices that systematically form the objects of which they speak” (Foucault 1972, 49). Within a certain dietetic discourse, some eating practices seem effective and others nonsensical. Different dietetic regimes, moreover, fit within and help constitute distinct “onto-political” (Connolly 1995)

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<sup>2</sup> Calling something discursive is not meant to invalidate or falsify it. A discursive phenomenon is real; it is constituted by texts and practices as a new object of knowledge emerges (Hall 1997, 44; Connolly 1985)

understandings of the cosmos that privilege specific modes of causal explanation, distribute agency amongst the various entities populating that cosmos, and establish a regime of truth for producing knowledge about matter and its possibilities for transformation. For example, the aphorism that “you are what you eat” has vastly different meanings within different dietetic epistemes, as the meaning of each of the terms—*you*, *are*, *what*, and *eat*—radically changes from one alimentary discourse to another.

Dietetic discursive formations coalesce along four different axes in addition to constituting a new, abstract object of knowledge. First, a dietetic discourse presupposes a particular model of the human body, its composition, and its inner workings; its understanding of the body produces a theory of incorporation to explain which parts of food get absorbed and how. The particular object of knowledge constituted by each discourse is the entity said to be incorporated into the body. Second, discourses about diet produce distinct ideas of what makes specific items of food healthy. Third, dietary regimes contain an account of the moral implications of different eating practices. Finally, within an alimentary episteme, authoritative knowledge about food derives from a particular site. The three dominant dietetic discourses in Western thought—the humoral, the nutritionist, and the ecological—are best distinguished along these four axes.

### **Humoral Dietetics and the Incorporation of Qualities**

The humoral regime can be traced to the Hippocratic corpus produced in the fifth century BCE and the texts of Galen of Pergamum, composed in the second century CE.

Humoralism continued to structure European medicine up through the eighteenth and

nineteenth centuries (Jouanna 2012; Nutton 2012; Powell 2003; Shapin 2014; Siraisi 1990; Temkin 1973). In this tradition, an individual body incorporated the qualities or properties of food that it digested, while digestion was understood as the heating of food within the stomach. Aliment was healthy when consumed in moderation and when its qualities agreed with the dominant humors of the eater. Medicine and morality were inseparable perspectives in this period: just as virtue required correct eating, health indicated a virtuous life. Finally, knowledge about aliment was derived from personal experience, and individuals were said to be their own best physicians.

The humoral regime understood nature as a cosmos divided into four. Four fundamental qualities (hot, cold, dry, and wet) in their binary combinations produced the four Aristotelian elements (air, fire, earth, and water), which in turn corresponded to one of the four humors of the human body (blood, yellow bile or choler, black bile, and phlegm). The dominance of a particular humor meant that an individual had one of four temperaments (sanguine, choleric, melancholic, and phlegmatic). The four humors and temperaments, moreover, corresponded to the four seasons (spring, summer, autumn, and winter) and to the four stages of life (childhood, adolescence, adulthood, and old age) (Galen 2000; Jouanna 2012; Powell 2003; Shapin 2014). All entities could be firmly placed within this schema:



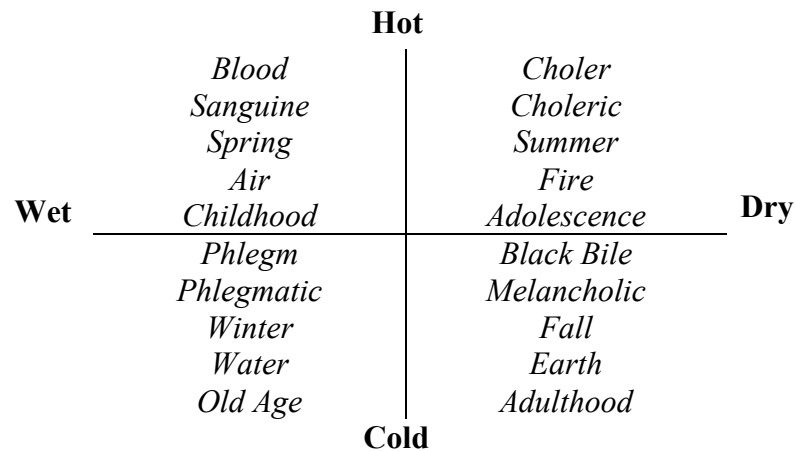


Figure 1 The Cosmological Grid<sup>3</sup>

A strictly regimented diet was essential to maintaining health, which was understood as the balance of the humors proper to an individual's constitution and temperament (Galen 2000, 16). Diseases, by contrast, "occur when the humours decrease or increase contrary to what is usual" (Galen 2000, 16). Certain foods, like human bodies, were dominated by certain qualities, so individuals seeking humoral advice were advised to adopt a moderate diet that agreed with their particular constitution or temperament. The Hippocratic treatise *A Regimen for Health* advises that diets "be conditioned by age, the time of year, habit, country, and constitution" (1983, 273). A sanguine person, in whom blood predominates, is hot and moist by nature and should therefore favor hot and moist foods, especially in autumn, in adulthood, or in a cold, dry environment. Curing diseases was accomplished by following the principle of opposites: a disease characterized by an excess of cold and dry qualities would be treated by eating hot and moist foods (Galen 2003, 35; Powell 2003, 3–4).

<sup>3</sup> This schema is derived from Galen (2000).

The concept of regimen connected medicine and morality in the humoral regime (Foucault 1990; Powell 2003, 4–6; Shapin 2003, 23; Temkin 1973, 39–40). As Foucault’s account of ancient medicine indicates, regimen or diet (the Greek word for regimen is *diatita*) was “a fundamental category through which human behavior could be conceptualized. It characterized the way in which one managed one’s existence....

Regimen was a whole art of living” (1990b, 101). Traditionally, regimen focused on what were known as the “six non-naturals,” the six elements not wholly determined by nature and therefore susceptible to manipulation: air, food and drink, sleep and watch, motion and rest, evacuation and retention, and the passions of the mind (Rather 1968; Coleman 1974). Food and drink, however, occupied a special and unique place (Jouanna 2012, chap. 8; Shapin 2014, n. 7). More importantly, a dietary regimen was made intelligible with reference to a much broader, medico-philosophical framework. The requirements for living healthily were the same as those for living virtuously (Foucault 1990, 102–103).

Accordingly,

that which was considered dietetically good *for* you was also accounted *morally* good. The relationship between the medical and the moral was not merely metaphorical; it was constitutive. In doing what was good for you, you were doing what was good: materially constituting yourself as a virtuous and prudent person, giving symbolic public displays of how virtuous and prudent persons behaved, encouraging behavior in others, fulfilling the noblest aspect of your nature as a human being. (Shapin 2003, 22–23)

Following a strict and proper regimen ensured both health and virtue. Above all else, virtuous eating demanded moderation; excess threatened one with disease and vice (Shapin 2003, 34–7).

Digestion was largely understood by Galen as the heating of food within the stomach (concoction) by the body’s innate or vital heat followed by the assimilation of nutritive elements in the liver (Galen 1968, 204; Powell 2003, 15). In the early modern

period, the vital heat (sometimes referred to as the vital spirits) was compared to a candle slowly consuming its wax. Robert Burton's massive and massively influential *Anatomy of Melancholy*, for example, explains that "digestion is performed by natural heat; for as the flame of a torch consumes oil, wax, tallow, so doth it alter and digest the nutritive matter. Indigestion is opposite unto it, for want of natural heat" (Burton 2001, 155). Francis Bacon develops the metaphor and makes it central to his recipe for long life: "the cause of the termination of life is this: the spirits, like a gentle flame, continually preying upon bodies, conspiring with the outward air,—is ever sucking and drying of them,—do, in time, destroy the whole fabric of the body" (1903, 122). Bacon even uses the metaphor to justify the traditional moderate diet recommended by Galenic medicine. "It is to be seen in flames," he notes, "that the bigger they are, the stronger they break forth, and the more speedily they consume. And, therefore, overgreat plenty, or exuberance of the spirits, is altogether hurtful to long life" (1903, 125). The theory of digestion therefore confirmed the connection health and virtue; the healthy diet, defined by moderation, ensured the possibility of virtue by extending life as much as possible.

Medical and moral knowledge in the humoral regime was located primarily with the individual. Physicians were important, but in pre-modern Europe their services were largely available only to the rich and elite (Shapin 2003; Siraisi 1990). Through close observation and analysis of oneself, however, humoral theory maintained that it was possible for anyone to learn what foods were agreeable or disagreeable (Galen 2003, 30). With this knowledge individuals could implement a regimen to maintain their own health most effectively. The *Regimen for Health* insists that "a wise man ought to ... learn how to treat his illnesses by his own judgment" (1983, 276). Virtue and health were

maintained by a regimented diet. Individuals, of course, drew heavily upon the received cultural traditions and norms governing aliment in designing a regimen.

## **Humoral Theory Meets Political Theory**

In this section I will describe some of the forms of political thought that relied on humoral theory, specifically debates about the emergence of coffee-houses in seventeenth-century England, Locke's theory of property, and Nietzsche's reflections on nutrition. In the early modern period, during the supposed heyday of dualism, proper diet and regimen were still seen as necessary to make oneself into a proper subject. Contrary to Lavin's narrative, food and digestion were relevant to political thought long before the supposed "digestive turn" effected by critics of liberalism in the nineteenth century (2013).

Dietetic discourse was made politically relevant through the metaphor of the body politic. The prince was described not only as the brain that manages the humors of his subjects but also as the stomach that distributes nourishment to them.<sup>4</sup> Eating was also considered a political act insofar as politics, morality, and virtue overlapped in Republican and Christian thought. In order to be a good citizen in the humoral regime one had to be virtuous, and proper diet was necessary to attaining this virtue (Foucault 1979, 88). Shapin notes, for instance, that "gentlemanly, and especially courtly, eating and drinking were overwhelmingly public acts...communal eating and drinking constituted social order, displayed social order, and sent finitely tuned messages back and forth among the drinkers" (2003, 28). Monarchs in particular were acutely observed and

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<sup>4</sup> For an example, see Legrand (1487). For further discussion, see Hale (1971). Patterson (1991) discusses the metaphor of the nobility as the stomach of the body politic in Shakespeare's *Coriolanus*.

expected to demonstrate moderation at the table (Shapin 2003, 29). The Prince's commitment to his own health demonstrated and secured his commitment to the health of the kingdom.

The rise of English coffee-houses shortly after 1650 set off a series of debates in mid-seventeenth century England about the political implications of diet. The introduction of coffee—simultaneously with tea, chocolate, and sugar—set in motion a number of transformations in England, helping usher in an age of commodity production, consumerism, and openness to new foods. The coffeehouses were defended, on one hand, as sobering alternatives to taverns and thus training grounds for liberal citizens, whereas they were attacked, on the other, as threats to the English social order.<sup>5</sup> During the Restoration period, Charles II even attempted to shut down the coffee-houses because they were becoming sites of dissent (Klein 1996; Cowan 2004).

While it was generally accepted that coffee was warm and drying, the social qualities and effects of coffee were contrasted in particular with ale and beer (Klein 1996, 41). Dryness, associated with black bile and yellow bile, was associated with a quick mind and body, so coffee was defended as a sobering drink. But dryness was not always good; in a humorous but nonetheless revealing pamphlet entitled *The Women's Petition Against Coffee*, the writers assert that “the Excessive use of that Newfangled, Abominable, Heathenish Liquor called COFFEE, which Riffing Nature of her Choicest Treasures, and Drying up the Radical Moisture, has so Eunuct our husbands ... that they

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<sup>5</sup> As Sidney Mintz so eloquently put it, “the first sweetened cup of hot tea [or coffee—TR] to be drunk by an English worker was a significant historical event, because it prefigured the transformation of an entire society, a total remaking of its economic and social basis. We must struggle to understand fully the consequences of that and kindred events, for upon them was erected an entirely different conception of the relationship between producers and consumers, of the meaning of work, of the definition of self, of the nature of things” (1986, 214).

are become *Impotent as Age*” (Women’s Petition 1674). The defenders of coffee, by contrast, praised its sobering effects and consequent ability to produce rational citizens. The responding *Men’s Answer to the Women’s Petition*, for example, claimed that coffee was a “harmless and healing Liquor, which Indulgent Providence first sent amongst us, at a time when Brimmers of Rebellion, and Fanatick Zeal has intoxicated the Nation, and we wanted a Drink at once to make us Sober and Merry” (Men’s Answer 1674). The men conclude their petition by exhorting: “Cease then for the Future your Clamours against our civil Follies. Alas! alas! Dear Hearts, the Coffee house is the Citizens Academy” (Men’s Answer 1674). The *Women’s Petition*, adopting the Royalist position, asserted that “at these Houses (as at the Springs in *Afric*) meet all sorts of Animals, whence follows the production of a thousand Monster Opinions and Absurdities; yet for being dangerous to Government, we dare to be their Compurgators” (Women’s Petition 1674). They furthermore note that coffee, rather than sobering its drinkers, merely enables them to drink more: “so once more they troop to the Sack-shop till they are drunker than before; and then by a retrograde motion, stagger back to *Soberize* themselves with *Coffee*: thus like *Tennis Balls* between two Rackets, the *Fopps our Husbands* are *bandied* to and fro all day between the *Coffee-house* and *Tavern*” (Women’s Petition 1674). Within these debates about coffeehouses, the political implications of the Galenic system become apparent. The effects of coffee on citizens are framed using the Galenic vocabulary and focus on its drying qualities.

By the mid-eighteenth century, however, the Whigs—especially their fabled historians—described coffeehouses as the protectors of “English Liberties” (Pincus 1995;

Klein 1996; Cowan 2004). Cowan has compiled some of the grandest claims about the coffeehouses:

For David Hume, the rise of the coffeehouse was proof of the ‘genius of the English government’ and a sign of the ‘liberty of the constitution’.... Hume’s contemporary James Ralph thought that the desire to suppress the coffeehouses indicated a desire by the Restoration regime to ‘extinguish the light of reason’ and to ‘subdue the power of reflection’ amongst its subjects.... For Thomas Babington Macaulay, the coffeehouses of Restoration England were ‘the chief organs through which the public opinion of the metropolis vented itself,’ and soon became a veritable ‘fourth Estate of the realm.’” (2004, 22–23)

The argument was even picked up by Shaftesbury, who argued that the good conversation of coffeehouses created virtuous gentlemen and secured social order. Shaftesbury “aimed to demonstrate, among other things, that neither the court nor the church was a suitable institution to supervise modern discourse.... By contrast, true politeness was expressed in and flowed from the educated gentlemanly conversation of equals” (Klein 1996, 48).

Coffeehouses served as training grounds for rational, liberal citizens free from the corrupting influences of the state and the church. The celebration of the coffeehouse “met the requirements of the Whigs for a cultural ideology that coordinated liberty and order” (Klein 1996, 50). Significantly, however, the ideological architecture defending the coffeehouses presupposed and relied on the humoral account of coffee as drying, sobering, and enlivening (there was no notion of caffeine). Without an already-circulating dietetic culture for understanding the impact of coffee on the body, the political defense of coffeehouses would have been unthinkable.

Even the thinkers who are said to have established a strict mind/body dualism concerned themselves with the connections between the brain and the stomach when they wrote about diet and medicine. Though Descartes claimed his philosophical revolution would transform medicine, his medical and dietary advice conformed to classical Galenic

principles very closely, emphasizing the importance of moderate diets and personal experience, as Steven Shapin has shown (2000, 149, 153). Even Kant in large part adopts and recommends the classical tenets of humoral dietetics. The third part of his *Conflict of the Faculties* discusses regimen and each of the six non-naturals (1979; see Unna 2012, 276–280). He both emphasizes the connections between morality and regimen and insists that wise individuals should be their own physicians (Kant 1979, 175; see Unna 2012, 282, 284–6).

Locke also practiced medicine and reflected on the connections between diet, the body, and the mind. His medical training was generally hostile to Galenism and humoral medicine; he studied and practiced what was known in seventeenth-century England as chymical medicine (Anstey 2010; see Rattansi 1964; Clericuzio 2012). Just like Descartes, though, Locke provided advice largely consistent with the Galenic tradition, despite his radical medical background.<sup>6</sup> In his *Notes Concerning Education*, Locke devotes the opening sections to a discussion of the non-naturals. He discusses what to wear in what weather and the role of the climate on health (airs); advocates exercise (motion and rest); recommends a temperate and moderate diet; proceeds to discuss sleep; devotes considerable attention to the importance of regular evacuations; and lastly turns to the passions of the mind (Locke 1695, secs. 3–30). He even begins the text with the classical aphorism “a sound mind in a sound body” and notes that “a full stomach is but an ill preparation” for “study” (1695, secs. 13, 15).

Eating figures even more prominently in Locke’s famous discussion of property. Although Locke’s objective is to justify individual property, he begins by acknowledging

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<sup>6</sup> That Locke wrote and argued within a discourse whose assumptions he rejected provides compelling evidence for its existence.



that the earth is the common property of humanity in general and defends humanity's ownership of the earth in common by claiming that "Men, being once born, have a right to their Preservation, and consequently to Meat and Drink" (1988, § 25). They have the right, therefore, to cultivate the earth and consume its creatures in order to survive. The requirements of the stomach, not the ideals of the rational mind, ground the institution of property which Locke's government is designed to protect. Turning from the discussion of common property to individual property, Locke again invokes the topic of digestion. It is the act of eating that creates the first individual property: "the fruit, or Venison, which nourishes the wild *Indian*, who knows no Inclosures, and is still a Tenant in common, must be his, and so his, i.e. a part of him, that another can no longer have any right to it, before it can do him any good for the support of his Life" (1988, § 26). In eating anything, the individual precludes any other from using that food. Eating thus makes any food item into something only the eater has a right to, i.e. the eater's property. Property began with the first bite.

Labor, then, appears as a kind of external digestion, an appropriation that happens with the hands rather than the stomach. Labor is the hands' way of claiming something in the world for their own, just as digestion is the stomach's way of claiming something external for the body's maintenance. When an individual mixes labor with the world and creates property, the process of incorporation just proceeds outwards. Locke's political subjects—those with property—are digestive subjects. Locke builds on the account of incorporation that grounds humoral dietetics; he has a clear account of what happens (politically) during digestion and uses this account to establish the basis of property. Dietetics thus underlies Locke's political philosophy, and its primary concern for

protecting individual property is made intelligible by Locke's consideration of digestion and incorporation.

Locating the intimate connection between Locke's dietetics and theories of property bolsters the contextualist interpretations of Locke that resist treating him as a theorist of liberalism (Laslett 1960; Pocock 1980). Locke's account of property in fact does not justify ever-increasing accumulation but refers to the natural limits of property, such as the "enough and as good" requirement, just as dietetic medicine emphasized living in accordance with nature (1988, 291). To find a "liberal dietetics" one must wait until the Whig histories of the English coffee-houses were written.

Humoral theory made its way not just into debates about coffeehouses and property, but also into Nietzsche's reflections on physiology and philosophy. Lavin has argued that Nietzsche began a digestive turn in political theory. But Nietzsche invents very little in this area; most of what he writes responds directly to the tenets of Galenic dietetics. Although humoral dietetics had indeed largely disappeared by the late nineteenth century, Nietzsche—ever untimely—revives it in his discussions of food. He recovers the emphasis on individual constitution, the connections between health and virtue, and the authority of individual experience.<sup>7</sup> Nietzsche's discussions of nutrition in *Ecce Homo*, for example, roughly conform to a classical discussion of the six non-naturals. The first three sections of the chapter entitled "Why I am So Clever" discuss the

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<sup>7</sup> Danielle Hallet has also explored the ways in which Nietzsche uses digestion and a concept of health to critique ascetic philosophy (2011). In her account, however, Nietzsche's interlocutors are not Galenic but nutritionist. She writes that "Nietzsche borrows from and aligns his critique with the scientific researches and cultural resources of nineteenth-century scientific physiology" (2011, 2). She focuses on the scientists Roux, Rolph, and Foster and argues that Nietzsche was influenced by contemporaneous ideas about the overuse of nervous energy. This account helpfully explains much of what Nietzsche discusses in earlier works, especially *The Gay Science*, but it fails to make any sense of the topics considered in *Ecce Homo*. I insist that Nietzsche was largely critical of the nutrition science of his day, even if he used its vocabulary, read its literature, and often followed its dietary advice. I will return to Nietzsche's relationship with Liebig in the conclusion.

topics of nutrition (food and drink), place and climate (airs), and recreation (motion and rest). In fact, Nietzsche's critique of modernity is often framed in terms that require knowledge of humoral dietetics in order to be intelligible. What seems like uninformed ranting by the crazy Nietzsche (a common enough reading of *Ecce Homo*) is actually an engagement with the tenets of humoral medicine. By discussing four of the non-naturals, Nietzsche was speaking in a conceptual and cultural vocabulary readily interpretable to pre-nineteenth century Europeans (Coleman 1974; Shapin 2014). Consider his claim to hate coffee (2010, 239). It could be a lament about a weak stomach, or it could be a metaphorical rejection of liberalism and the Enlightenment both of which, as I just explained, were linked with coffee and tea's replacement of beer as the typical social drink.

In the first section of "Clever," Nietzsche expresses his interest in the "question on which the 'salvation of humanity' depends ... the question of *nutrition*" (2010, 237). Nietzsche poses the question thus: "how do *you*, among all people, have to eat to attain your maximum of strength, or *virtù* in the Renaissance style, of moraline-free virtue?" (2010, 237). Nietzsche's formulation is Galenic; he simply replaces the standard goals. The practices Nietzsche recommends plant him firmly within the humoral discursive formation, even though he uses them for his own distinct ends. His diet is used to promote strength and vitality (Machiavellian *virtù*) rather than moderation and temperance (Christian virtue). Nietzsche, moreover, relies on many of the standard Galenic principles. He focuses on the individual body, connects a particular diet with a particular kind of virtue, and bases his reflections on personal experience. It is the discourse of humoral medicine that explains how, as Jane Bennett writes, "edible matter

appears as a powerful agent” for Nietzsche (2010, 44). When Nietzsche notes that “the origin of the *German spirit* [is] distressed intestines” we might think he is joking; yet Galenic culture had always emphasized the strong connections between the stomach and the brain, on the one hand, and between climate and culture, on the other (Shapin 1998).<sup>8</sup> Going all the way back to the Hippocratic treatise *Airs, Waters, Places*, dietetics emphasized the connections between constitution and place (Jouanna 2012, chap. 8). The climate of the region affected one’s temperament and constitution, just as the turning of the seasons did. Greeks had their own constitutions, and so did the Persians and Scythians. The Germans, too, would logically have a national temperament and constitution. Furthermore, when Nietzsche recommends dry air (and he does so on numerous occasions), he does so because dry air would bring out and heighten the dry humors. Nietzsche, then, adopts the tenets of humoral dietetics, but uses them to argue against asceticism. Understanding Nietzsche’s untimely interventions, then, requires an understanding of Galenic medicine. Lavin’s claim that Nietzsche participates in a new digestive turn mischaracterizes both the latter’s enterprise and the sources he draws upon.

While the demise of Galenic medicine eliminated the humors and qualities as objects of knowledge, in their place a new entity emerged: the chemical nutrient.

### **Nutritionist Dietetics and the Incorporation of Nutrients**

The nutritionist regime that solidified in the nineteenth century radically changed the meaning of incorporation by replacing the four Galenic qualities, humors, and

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<sup>8</sup> Even Francis Bacon and Immanuel Kant subscribe to the same views. Bacon writes: “It is certain also that the brain is as it were under the protection of the stomach, and therefore the things which comfort and fortify the stomach by consent assist the brain, and may be transferred to this place” (1858, 299). Kant notes that: “the practice of occupying oneself with reading or reflecting when dining alone provokes pathological feelings; for intellectual work diverts vital energy from the stomach and bothers it” (1799, 199).

temperaments with the components or constituents of food (Scribis 2008, 2013; Pollan 2008; Shapin 2014). Food came to be understood not as a set of qualities but as a collection of nutrients—proteins, carbohydrates, fats, vitamins, and minerals—and as a container of a specific amount of energy, measured in calories. Bodies are said to be capable not only of assimilating these nutrients because they are collections of the same chemical compounds but also of converting food into energy because they are thermodynamic machines. Digestion bifurcates into two processes: the chemical conversion of certain food components into nutrients for reconstituting bodily tissue and the transformation of others into energy.

Like humoral dietetics, nutritionism can be situated along the four axes concerning the body, health, morality, and authoritative knowledge. Nutritionism reduces both food and the human body to a set of measurable, chemical components. These components are known through conceptual abstraction, however, not physical experience. Nutrients can be quantified but they cannot be sensed as individual units; no eater ever encounters a solitary protein or calorie. The healthy diet is consequently represented as a quantitative formula. Proper diet remains morally necessary as it becomes promoted by the state in its efforts to secure the health of the population, even as proper diet is determined and validated by state-produced knowledge. Finally, doctors and scientists have sole access to expert medical knowledge unavailable to the lay individual.

Although there were numerous challenges to the Galenic paradigm throughout early modern Europe from thinkers like Paracelsus, Harvey, Cheyne, Cullen, and von Helmont (Temkin 1973), by the end of the nineteenth century nutritionism had largely replaced humoral dietetics as the dominant dietetic discourse. The shift was propelled by

developments in chemistry, such as those presented in popular texts by Liebig (Brock 2002). Widely circulated and reissued throughout the North Atlantic world (Brock 2002, 289–90), his *Familiar Letters on Chemistry* devote considerable attention to aliment and digestion. For Liebig, aliment has two functions: first, to provide the body with the nutrients it needs to create blood and renew the organs and, second, to supply the body with substances that can combust with oxygen in respiration. In other words, food provides both nutriment that will replenish the body and fuel that will become vital heat (or energy).

Since human, animal, and vegetable bodies are all composed of the same chemical elements in Liebig's account, the digestion of nutrients entails assimilating those nutrients into the blood and subsequently converting them into bodily tissue. Simply put, bodies and food are composed of the same stuff. Liebig does note, however, that food contains many elements that can be neither converted into blood nor evacuated but are instead "expended in the production of animal heat" (1843, 99). Liebig compares the body to a furnace, writing that "the animal body acts ... as a furnace which we supply with fuel" (1843, 74), and "in the animal body the food is the fuel" (1843, 75). Foods that are used in respiration produce energy to power the mechanical body. Whereas the Galenic body was endowed with an innate, vital heat that digests food, the nutritionist body requires external sources of thermal energy and digests food by breaking it down into components. And whereas the candle metaphor of Bacon and Burton implies that the body's store of vital spirits is finite and determined at birth, the furnace metaphor implies that the body can remain alive as long as its components work and have sufficient food/fuel.

Later in the nineteenth century, Wilbur Atwater's experiments in caloric measurement helped further reduce food to quantifiable and calculable abstractions. Atwater researched the caloric contents of food items for the US Department of Agriculture by building the first American calorimeter and publishing numerous articles on nutrition science in popular journals like *Century Illustrated Magazine* (Cullather 2007, 340).<sup>9</sup> Unlike the Galenic qualities, unique to any food, "the calorie represented food as uniform, composed of interchangeable parts, and comparable across time and between nations and races" (Cullather 2007, 345). The calorie allowed for the precise numerical measurement of diets, and "the calorimeter had ramifications for the management of factories, prisons, and schools, as well as the provisioning of armies" (Cullather 2007, 341). Now diets could be designed that would supposedly sustain any individual or any number of individuals without excess or waste.

The nutritionist body differs significantly from the Galenic body in other ways as well. Along with the qualities, humors, and temperaments, the importance of tailoring diet to individual constitution disappeared. For Liebig, the human body is universally the same, rather than radically individualized, and Liebig justifies this claim by arguing that all human bodies—indeed, all bodies—are composed of the same chemicals. The periodic table of the elements is to nutritionist discourse what the association of qualities is to the humoral regime. The body, furthermore, begins to be conceived of as a thermodynamic engine requiring a constant supply of fuel in order to function (Rabinbach 1992). No longer concerned with individual constitutions and temperaments, dietary advice in the nutritionist regime is targeted at the human body in general. Healthy eating involves consuming the correct number of nutrients and calories, but the correct

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<sup>9</sup> A calorimeter burns food in an enclosed chamber and measures the amount of energy released.

number is determined by statistical methods that measure averages rather than by reflection based on personal experience. Nutritionism links the concept of health to a precisely quantified diet that supplies all vital nutrients at minimal cost and with minimal effort from the eater (Scrinis 2008). Such a vision saturates contemporary popular culture and accounts for the popularity of fad diets that claim to have discovered the true formula for health. Liebig's "Extract of Meat" was one of the earliest such products sold as a dietary panacea, and even Nietzsche was a consistent, albeit contemptible, consumer of it. I will return to the relationship between Nietzsche and Liebig in the conclusion.

Another particularly illuminating example comes from the television show *I Love Lucy*, in particular the famous episode "Lucy does a TV Commercial" in which Lucy stars in an advertisement for the product "Vitameatavegamin." The writers of the show perfectly captured the essence of nutritionism with Lucy's satirical lines:

Hello, friends. I'm your Vitameatavegamin girl. Are you tired, run down, listless? Do you poop out at parties? Are you unpopular? The answer to all your problems is in this little bottle. Vitameatavegamin contains vitamins, meat, vegetables, and minerals. Yes, with Vitameatavegamin you can spoon your way to health. All you do is take a tablespoon after every meal.

And then the punch line: "It's so tasty, too. Just like candy!" juxtaposed with Lucille Ball's exaggerated grimace (Figure 2). The lines parody nutritionism's focus on the energy balance ("tired, run down") and its social implications ("unpopular"); its reduction of all types of foods to a single essence, even a single word; and its regimen of daily supplements ("a tablespoon after every meal"). The slogan of the product—"Spoon your way to health!"—represents the *telos* of nutritionist dietetics. The essentials of life can be reduced to a tablespoon. The bodily recoil represented by Ball's grimace upon her first taste of the product appeals to a common perception of the potential dangers and displeasures associated with nutritionist reduction.





**Figure 2 Vitameatavegamin poster and Lucy's grimace**

Diet remains moralized in nutritionist discourse, but the ultimate value of eating well changes considerably. An individual is still held personally responsible for eating healthy food, but the virtues of eating correctly are most often linked to the success of state projects, especially those concerning public health and the development of the national economy (Rose 1999, 6). Proper diet thus ensures the health of that other new object of knowledge: the population (Foucault 2009). Nutritionism argues that health benefits the population as much as the individual. Atwater's research, for example, sought to calculate the minimum number of calories needed by the working classes so that wages could be kept at a minimum, and food was rationed in terms of calories during the first and second world wars (Cullather 2007, 343, 347–8). Health costs produced by unhealthy diets are said to threaten the social safety net and economic productivity more broadly. Rhetoric around obesity is one of the most moralized, insofar as eating too many calories is cast as a failure of will power (Guthman 2012).

Nutrients also have a different epistemological status than Galenic qualities. In the Galenic system, sensory experience yields authoritative knowledge about food (Cullather 2007, 345; Shapin 2014, 390). The four qualities can be easily detected by any individual.

Nutritional components, however, can only be known and accessed by scientific experts (Shapin 2007, 2014; Scrinis 2013, 13). It takes a calorimeter to calculate how many calories an item of food contains, and one needs a chemical laboratory to discover its nutritional composition. While individuals must act as responsible agents by seeking out nutritional information, they rely on external sources for it. Innovations in nutritionist science are driven in large part by corporate needs. Large agribusinesses now provide most of the funding for researching and developing new kinds of foods. The need to create new markets for new tastes while minimizing costs and inputs drives most contemporary scientific advancements.

The development of nutritionism, moreover, was keyed to larger transformations in the character of government that have been tracked by Foucault (2009). Specifically, the reduction of food to abstract components inaugurated a new form of biopolitics by altering the means by which the state measures and comes to know its population. The needs of the population began to be calculated according to nutritionist principles that eventually become the government-sanctioned Recommended Daily Values (see Nestle 2007, 307). Nutritionist discourse continues to provide a regime of knowledge for regulating the dietary conduct of individuals, what Foucault would call the “conduct of conduct” (2009). Nutritionist political institutions create nutritionist citizens by subjecting them to abstract, quantitative information as often as possible, most often in the form of the nutrition label and other state-issued guidelines (Nestle 2007; Scrinis 2008, 2013). The omnipresence of nutritional information instills the responsibility to choose food correctly by relying on quantitative metrics. Even if the nutrient to be counted will change over time, something must always be counted.

In contemporary American politics, nutritionism largely informs the debates over constructing Federal nutrition guidelines. Marion Nestle has documented the “ways in which food companies use political processes—entirely conventional and nearly always legal—to obtain government and professional support for the sale of their products” (2007, 1). When the American government was constructing the food pyramid that dominated nutrition advice in the 1990s and 2000s, for example, “agency officials learned to avoid such interference by ... focusing recommendations on nutrients rather than on the foods that contain them” (Nestle 2007, 3). Because industry opposition prevented the USDA from flat-out saying “eat less of X food,” the guidelines has to say “eat less of Y nutrient.” Nutritionism thus serves as a political language that deflects and shields bureaucrats and politicians from public or corporate opposition.

Nutritionism, furthermore, proved instrumental to both the functioning and theorization of liberal capitalism. Like his contemporaries, Marx read Liebig and credited him with the discovery and explanation of capitalism’s depletion of the European soils (Marx 1981, 637–638; see Baksi 1996). The value of labor-power for capitalists, Marx explains, is measured by the cost of the abstract amount of food necessary to reconstitute the laborer (1981, 274–5). A laborer appears to a capitalist as a body requiring a certain amount of nutrients, the cost of which can be precisely calculated, and as an engine requiring enough of a wage to purchase the minimum amount of fuel. The transformation of food into an abstract, quantitative unit rather than a particular collection of qualities also coincided with the transformation of agricultural products into abstract commodities (Cronon 1991, chap. 3). Using the discourse of nutritionism to articulate its goals, industrial agriculture seeks to increase profits and yields.

Returning to the example of coffee and coffee-house culture once again proves illuminating. For nutritionists, the defining element of coffee is the chemical caffeine. Coffee's effect on the body is explained not as dryness but as a chemical reaction between caffeine and neurons in the brain. Liebig acknowledges Macaulay's "well-merited attention on the influence of coffee-houses on the political condition in the seventeenth century," but laments that "the share which the constituents of coffee then had in determining the direction of mental activity is a problem what has yet to be solved" (1859, 472). He knew caffeine was the important chemical, but did not know just how it acted on the brain and nervous system. The chemical analysis of coffee and the isolation of caffeine, however, made possible two new forms of coffee in the first decade of the twentieth century: decaffeinated and instant (Topik 2009). The creation and spread of both, moreover, can be credited to the alliance of nutritionism and capitalism. Together the new forms of coffee expanded its consumption inside the home and to all parts of the day. Private consumption of coffee in the kitchen in order to wake up and quickly become productive has taken precedence over the need for public places that generate sobriety in the minds of coffee drinkers and those who sell the beverage.

Nutritionism still largely governs the dietary advice and practices, although the discourse has recently become the object of criticism. This new challenge, I argue, amounts to the creation of a new dietetic discursive formation.

### **Eco-dietetics and the Incorporation of Values**

For almost half a century, chefs, farmers, and activists in the North Atlantic world have been advocating for a new system of agriculture based on the production and consumption of fresh, local, and organic foods. Journalist Michael Pollan, chef Alice

Waters, farmer and poet Wendell Berry, and activist Carlo Petrini have been the most vocal and notable exponents of this view. A number of parallel social movements and general cultural trends coalesced around this call: the Slow Food movement; sustainable agriculture; organic farming; local farmers' markets; Community Supported Agriculture; and farm-to-table restaurants. Unlike the nineteenth-century critics of industrial agriculture who articulated the moral implications of eating in terms of virtue and therefore belonged to the Galenic tradition, food movements in the 1960s began to use the language of environmentalism and celebrated food for the pleasure it could provide (Belasco 1989).

Although these movements are quite diverse and go by different names, together they have formed a new dietetic discourse by creating a new object of knowledge: the effects of eating on the environment. As with Galenic and nutritionist dietetics, the injunction that one eat in a certain way—prioritizing fresh and local food, for example—is made intelligible by and presupposes its own regime of knowledge about aliment. In the eco-dietetic version of incorporation, it is perhaps more accurate to say that you are *how*, rather than *what*, you eat. Eaters incorporate the values and methods that governed the cultivation of the particular food. If one eats local and organic food, so the logic goes, one becomes a local and organic person. If one eats slowly, one becomes a slow person. And so on.

As with humoralism and nutritionism, eco-dietetics includes its own conceptions of the body, health, virtuous eating, and authoritative knowledge about food. The body acquires the characteristics, values or ideals of the process that sustain it. Within this regime, the healthiest and best food is freshest or most “in season” and produced as close

as possible to the eater. Eating healthily remains equated with eating ethically, since eating fresh and local food is necessary to transform an industrial system of agriculture and contain its environmentally devastating effects. Finally, authoritative knowledge about food comes partially from the senses but primarily from the farmer and the chef, i.e. those who most closely interact with the food itself.

Eco-dietetics conceives of the body as a part of a larger ecosystem or environment. Whereas the body in Galenism is individualized within a defined set of parameters and in nutritionism has universal properties, the eco-dietetic body is linked to an ecosystem from which it cannot be isolated. Because bodies are products of their ecosystems, both share the same characteristics. Bodies absorb the values, norms, and attributes of their environment. In this sense it is possible to describe both bodies and agricultural systems with the same terms: industrial, local, organic, fresh, seasonal, slow, fast. Wendell Berry, for example, contrasts “industrial eaters” (1990, 146) with responsible or conscious eaters, while the Slow Food manifesto connects “fast food” with “fast life” and recommends slow food as the antidote (Portinari 1989). Bodies incorporate whatever characterizes the origin, method of production, and manner of consumption of the food they eat.

Cheese provides a helpful illustration of the eco-dietetic notion of the body. As Heather Paxson has argued, cheese itself is an ecosystem—a symbiotic relationship between the milk and the bacteria that have colonized it (2008, 37). To eat cheese is to incorporate the bacteria in the milk, but the distribution of bacteria that colonize the cheese will mimic that of the place where the cheese aged. Humans, however, are like an ecosystem. They digest food largely because of the nearly one pound of bacteria and

other microorganisms that live in their digestive tracts. They are themselves ecosystems and assemblages of many agents (Bennett 2010). To eat food is to absorb an microbial ecosystem along with a particular ecosystem of production.

Eco-dietetics holds food to be more salubrious the fresher and more local it is. Both Waters and Berry, for example, provide a list of recommendations for eating the best and healthiest food. Waters urges consumers to “Eat locally and sustainably. Eat seasonally. Shop at farmer’s markets. Plant a garden” (2007, 6). Berry recommends: “Participate in food production to the extent that you can. Prepare your own food. Learn the origins of the food you buy, and buy the food that is produced closest to your home. Whenever possible, deal directly with a local farmer, gardener, or orchardist” (1990, 149–150). These recommendations share an underlying vision of what makes some foods better—tastier, healthier, more ecologically friendly—than others. Food carries with it the attributes of its method of production. Food is better the faster it reaches a mouth after it has been harvested and the more involved the eater is in its production and preparation.

Eating locally is moral because of its consequences for nonhumans and the environment. Fresh and local food not only keeps the human body healthy but also arrests the destruction of the planet initiated by industrial agriculture. Waters insists that decisions “about the food we eat are the most important decisions we make: they are ... about the quality of our lives and the health of the planet” (2005, 1). For Waters, the sensory experience of “truly delicious” food is “the one central thing about human experience which can open up both our senses *and our consciences* to our place in the world” (2005, 3 *emphasis added*). Pleasurable eating coincides with moral eating. In other words, aesthetics and ethics parallel each other; taste corresponds to virtue. Waters

insists that “environmentalism can be something that actually affects you in the most intimate—and literally visceral—way. It can be something that actually *gets inside you and gets digested*” (Waters 2005, 3 emphasis added). One digests not the just the food itself, but the values according to which it was produced. In a similar fashion, the literature of the Slow Food movement promotes “eco-gastronomy,” an idea defined as “a recognition of the strong connections between plate and planet” (Slow Food 2015). Pollan’s journalism has emphasized the environmental consequences of the growing use of fossil fuels, petrochemical fertilizers, other petroleum byproducts in agriculture, monocultures, and concentrated animal feeding operations (2008).<sup>10</sup>

Finally, for eco-dietetics, only material interaction with food during its production and preparation yields authoritative knowledge about its freshness and origin. Consumers who want information concerning the production, harvesting and sale of their food have two options: become acquainted with the farmers or grow the food themselves. Waters even promotes institutional, alimentary education for children, famously arguing that “lunch should be at the center of every school’s curriculum” (2006). Accordingly, she writes that “learning to feed yourself is just as important as reading, writing, and arithmetic” (2005, 4). Knowledge about food is thus potentially available to anyone, not just experts, but it requires involvement in the production of the food itself.

Eco-dietetics, however, does not entirely abandon expert-scientific knowledge. The central concept on which the discourse depends—the globally interconnected

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<sup>10</sup> There are two common objections to the argument in favor of local food: that it is inefficient economically insofar as it ignores comparative advantage and that is unjust ethically insofar as it might aggravate rather than alleviate urban poverty by limiting access to food necessary for large populations. In response to both, however, none of the eco-dietetic advocates proffer an absolute rule in favor of locally production everywhere. They certainly favor it, but more important to them is the maximal participation in the cultivation of food that locality allows.



environment—was an object of scientific knowledge produced by a vast confederation of scientists and authors during the 1960s. Three figures in particular were important for the early eco-dietetic movements: Rachel Carson, James Lovelock, and Francis Moore Lappé (Belasco 1989). Carson’s book *Silent Spring* exposed the harms of DDT use in pesticides; Lovelock’s “Gaia hypothesis” described the earth as unitary, self-organizing ecosystem; and Lappé’s *Diet for a Small Planet* made the first environmental case for vegetarianism by documenting the harms of large-scale, industrial livestock production. Lappé’s book is especially interesting as a text that straddles nutritionism and eco-dietetics. She defends vegetarianism for ecological reasons, but her overall thesis depends on the nutritionist claim that animal and vegetable proteins are equivalent, what she calls “protein complementarity” (Belasco 1989, 58). In the next decades, the scientific consensus that emerged about the human origin of changes in the “the climate” gave further sustenance to the eco-dietetic movements.

As with humoral and nutritionist dietetics before it, eco-dietetics is not a unified, monolithic discourse but contains distinct variants. Eco-dietetics in particular can be divided into two camps, agrarian and corporate. Eco-dietetic practices are agrarian when the distance between farm and plate is minimized both spatially and temporally, and when the eater actively participates in the growing and preparing of food. They become corporate when profit overtakes pleasure as the motivation for production or consumption decisions and when intermediaries, whether stores or packaging, distance or delay, come between farmers and eaters. Waters, Berry, and Slow Food belong in the former, while in the latter are Whole Foods and other large corporations that increasingly market food labeled as ‘all natural.’ The existence of these competing camps, however, proves that

eco-dietetics has become a full-fledged discourse. Corporations can successfully market their products using eco-dietetic concepts because of the power of eco-dietetics' new object of knowledge, the links between plate and planet. The conflation of these two camps, however, has led some to criticize all eco-dietetic movements rather than just corporate opportunism. As the next section will argue, the agrarian movements actually provide a credible and powerful alternative to neoliberal capitalism, even if corporate eco-dietetics does not.

### **Neoliberalism and the Varieties of Eco-Dietetics**

I emphasize that the diverse and growing alternative food movements have inaugurated a new discursive formation both to connect them to the history of dietetics and to help rebut the critics who remain skeptical that these movements represent anything new or important (Allen and Guthman 2006; Guthman 2004, 2008, 2012; Lavin 2009, 2013). Such critiques coalesce around three related claims that suggest these contemporary food movements are disguised forms of neoliberalism.<sup>11</sup> First, that eco-dietetic discourse depoliticizes diet by replacing state-centered activism with economic consumption and privileges the market rather than the state as the site of collective action; second, that the discourse relies on classical liberal notions of sovereign individuals who act only out of self-interest; and third, that fresh and local food is only for rich, bourgeois individuals. Such criticisms, however, radically mischaracterize the production and consumption of fresh and local food. The dietary routines that characterize eco-dietetics would alter a social formation to make its constituent process less neoliberal. More importantly, these

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<sup>11</sup> To recall: I understand neoliberalism as a program or agenda presupposing the following: that "the economy" is an object of knowledge capable of being measured and represented numerically; that acquiring money and contributing to the growth of this economy is the *telos* of human life; and that the role of the state is to support and enforce the optimal conditions for the growth of this economy.

criticisms fail to distinguish between corporate and agrarian eco-dietetic practices; it is the latter, not the former, that best resists neoliberalism.

In summing up the first challenge, Lavin writes:

reducing politics to consumerism and economics to ethics, current approaches to responsible foods and food activism tend to reflect the actual foreclosure of political possibility. By relocating political action to the actual and metaphorical space of the market, these trends reflect the subordination of political discourse to the terms of global capitalism and a neoliberal condition in which it is only in the rhetoric of consumer choice that Americans can imagine wielding power (2013, 94).

According to this view, current movements that focus on local and organic food place their hopes in market mechanisms rather than the state. For Julie Guthman, “the increased salience of food politics in contemporary life may itself reflect the neoliberal turn, particularly insofar as much of what passes as politics these days is done through highly individualized purchasing decisions” (2008b, 1175). The problem, then, is something of a self-fulfilling prophecy: by focusing on market solutions to contemporary problems, local and organic food movements constrain our ability to imagine authentic political change through the state. Focusing too much on what happens at the table ignores larger political structures. Critics also accuse local and organic food discourse of relying upon fragile notions of autonomous, sovereign individuals who are rational utility-maximizers, always acting in their own self-interest. Contemporary food writing often places the impetus on the individual to acquire enough knowledge to be able to make informed choices. As Guthman notes, “today, popular presentations are full of ‘making choice’ ‘voting with your dollars’ and, again, ‘knowing where your food comes from’—linking knowledge explicitly with choice” (2008b, 1176). These slogans cast the individual as a disembodied, rational decision-maker whose power comes from knowledge and consciousness. But knowledge alone, for these critics, is not enough to change very much

about the contemporary food system (Guthman 2008a). By focusing on what food a consumer chooses to eat, these movements imply that it is the fault of the individuals rather than the global food system that the earth is being destroyed. And third, critics accuse the food movements of being classist and elitist (Guthman 2003, 2004). Because of the expense and limited availability of fresh and local food, eating it is possible only for a specific and affluent class. Furthermore, local and organic food movements are criticized for being too easily co-opted by corporations, especially in the form of advertising (Allen and Guthman 2006; Guthman 2012). Industrial food can be labeled “local and organic” without any change in the dominant methods of production (Allen and Kovach 2000; Young 2014).

More than the mere transfer of food from plate to stomach, eating also includes the production and distribution of the food. Eating one particular item draws the eater into a recurring cycle of production that begins with planting and harvesting, proceeds to consumption, ends with the return of waste to the ground, and begins again. While contemporary eaters may often experience eating solely as a discrete act of consumption, such an experience is only possible in a world of industrial agriculture in which food almost magically appears ready-to-eat with its origin obscured. The industrial eater encounters food through the lens of nutritionism, as a set of abstract components. An attempt to eat mostly local and organic food, however, requires active attention to the provenance of a food, surpassing the boundaries of mere consumption from the very beginning. Eating locally produced food supports, via commodity-chains, seasonal production and direct distribution from producer to consumer. These alimentary

networks, moreover, resemble the communities of touching comrades that Whitman envisions.

Lavin and other critics of contemporary food movements therefore perpetuate a false notion of “the market” by presupposing that only one, universal market exists and that it is a spontaneous, natural system for interaction. But markets have no single institutional form (see Unger 2009, 115). Even Simon Kuznets, who appeared in the first chapter as an early theorist of “the economy,” recognized that “there are different kinds of market expressive of significantly different underlying social relations” (1941, 8). Different markets can have different goals, whether personal profit for farmers, returns for outside investors, national productivity, healthier food, or even stronger community ties. Markets can also be populated by very different kinds of commodities. A quick comparison of a supermarket to a standard farmer’s market is helpful. The industrial supermarket is characterized by permanent abundance, packaging of most products, vast distribution chains, and corporate management, while the agrarian farmer’s market is characterized by seasonal availability, minimal or no packaging, local distribution, and personal ownership. Different routines characterize the two kinds of market. Rather than speak of “the market” it is better to speak of markets and their constituent routines. Markets are highly political: they structure many of the interactions and relations within a social formation.

Since the birth of the modern nation-state, there have been no “spontaneous markets” that emerged out of nature as in a childhood fairytale where the magician quickly conjures a busy marketplace out of thin air. Markets and the idea of market societies require very specific social formations in order to exist. As I argued in chapter

one, different methods of observation and measurement engender different representations of the economic domain, which in turn influence the routines of production. A market in labor, I claimed in chapter two, requires forcefully divorcing the vast majority of individuals from access to their own sources of food and means of production. In blunter terms, then, the accusation by Guthman and Lavin that fresh and local food movements abandon the state for the market buys into the faulty logic that juxtaposes *the* market to *the* state as an independent and natural domain. A market society is still politically constituted, and markets are sites of politics just as much as the chambers of national legislatures. The very idea of a national market and its GDP is the product of three centuries of attempts to measure first, the balance of trade, and eventually national income within an economic unit. All of this is to say that the relationship between markets and states are complex and deep. It is too hasty to oppose the abstractions “the market” and “the state.”

Wendell Berry writes that “eating is an agricultural act.” As a corrective to those who may experience eating solely as an act of consumption, Berry stresses that the actual consumption of an item of food comes at the conclusion of a vast agricultural cycle (1990, 145). For Berry, eating responsibly cultivates an attachment to and respect for the earth and not the confirmation of self-control that some critics have attributed to eco-dietetic practice: “eating with the fullest pleasure—pleasure, that is, that does not depend on ignorance—is perhaps the profoundest enactment of our connection with the world. In this pleasure we experience and celebrate our dependence and our gratitude” (1990, 152). Pleasure emerges from the eater’s intimate involvement in the production of food. Handling foods during their cultivation—touching them—creates affective attachments

between both parties. Berry further emphasizes that “eating takes place inescapably in the world ... and how we eat determines, to a considerable extent, how the world is used” (1990, 149). Food celebrated for its taste rather than its nutritional value, and cultivated in some fashion by the eater, is affectively encountered differently than food that comes pre-cooked, packaged, and ready-to-eat.

The style of eating entailed by agrarian eco-dietetics cultivates an ethos for connecting the self to the world through the experience of enchantment. Jane Bennett describes this experience of enchantment as a mood that “entails a state of wonder” (2001, 5). For Bennett, the “affective force” of moments of enchantment “might be deployed to propel ethical generosity” (2001, 3). Bennett thus conceives of enchantment as “a comportment that can be fostered through deliberate strategies” (2001, 4). Comparing these strategies to Foucault’s arts and practices of the self and Nietzsche’s giving style to one’s character, Bennett issues a “*call* to engage in the self-discipline necessary to assemble one’s affects into an aesthetic sensibility and to render sense-perception sensitive to the amazing specificity of everything around us” (2001, 149). Farming, cooking, and eating for pleasure resist the drive for profit and self-interest that favors highly processed, ready-to-eat foods. For eco-dietetics, the pleasure of eating arises from the nexus of an appreciation of the food’s taste, an intimate knowledge of its origin, and a cultivated care for the earth.

Consider coffee a final time. The eco-dietetic emphasis on locality seems like it might prevent the consumption of coffee around the globe, but in practice it has not. The eco-dietetic influence appears instead in cultures of connoisseurship that promote the use of taste to detect a coffee bean’s origin. Whereas nutritionist coffee consumption

emphasizes the pick-me-up of caffeine and the speed of instant coffee, eco-dietetic coffee consumption prioritizes pleasure and taste, both of which are said to be linked to the geographical origins of the beans and the methods of brewing. As with wine, coffee is said to taste of its origin; it has *terroir*. *Terroir*, moreover, has a humoral and an eco-dietetic variant. Galenic accounts of *terroir* focus on the four qualities and their presence in the land (Shapin 2014). Eco-dietetics links taste to broader environmental factors and methods of production. (Nutritionism, however, ever the disenchanter, explains *terroir* as the presence of identical chemical compounds in the wine or coffee and whatever item's smell the drink resembles.) Connoisseurship can be a product of bourgeois elitism, but it can also be a product of enchantment with agriculture.

Eating occurs multiple times a day and perhaps occupies more of our time and energy than most other activities. By eating particular foods, moreover, we set in motion a process to alter the earth in one way or another. Viewing food as fuel or inert matter cultivates practices of waste and overproduction. Bennett echoes this sentiment: "What would happen if slow food were to incorporate a greater sense of the active vitality of foodstuff? If I am right that an image of inert matter helps animate our current practice of aggressively wasteful and planet-endangering consumption, then a materiality experienced as a lively force with agentic capacity could animate a more ecologically sustainable public" (2010, 51). Participating in the production of food, then, helps the eater incorporate a certain set of values based on enchantment and celebration. While we eat, we practice comporting ourselves in a particular way and make claims to certain kinds of knowledge about our food. And since we seem to eat more often than we do just about any other activity, when we eat we train our bodies and ourselves to conform to a



particular style of existence.

Eco-dietetics' thus challenges both neo- and classical liberalism's emphasis on a disembodied, rational subject. Wendell Berry explicitly avows Thomas Jefferson's republican vision. Jefferson's version of republicanism placed the fate of a republic in the hands of its farmers: "generally speaking, the proportion which the aggregate of the other classes of citizens bears in any state to that of its husbandmen, is the proportion of its unsound to its healthy parts, and is a good-enough barometer whereby to measure its degree of corruption" (Jefferson 2008). Berry echoes this sentiment, arguing that "we cannot be free if our minds and voices are controlled by someone else ... we cannot be free if our food and its sources are controlled by someone else" (1990, 147). Civic republicanism associates virtue with citizen participation in public affairs; agrarian republicanism associates virtue with citizen participation in agriculture. Eco-dietetics resonates more with an agrarian republicanism than it does with corporate neoliberalism.

To rebut the third critique of eco-dietetics it should be remembered that although currently only certain classes have steady access to fresh and local food this situation is the result of the dominance of industrial agriculture and the state policy that enables it through subsidies. The US government, for example, not only directly subsidizes the production of certain commodities but also uses public procurement programs like the National School Lunch Program to purchase surplus commodities on national markets (Levine 2010). Were these resources instead diverted towards more sustainable agricultural production, fresh and local food could be made available to many more people. Waters, for example, defends universal school feeding programs that provide fresh and local food to all children twice a day regardless of income. Waters' Edible

Schoolyard foundation helps individual schools and districts cultivate gardens on school grounds where food is grown, harvested, and prepared by the students. Waters does not want school districts to purchase fresh and local food (corporate eco-dietetics); she wants them to grow the food themselves (agrarian eco-dietetics). The diverse, even radical proposals offered by eco-dietetic activists reach much further than calls to “vote with your fork” or superficial adjustments to consumerist practices. Eco-dietetic movements recognize the intimate connections between state politics and markets and call for public resources to be used to re-structure food markets in particular. They not only counteract the neoliberal separation of market and state but seek to make fresh and local food available to everyone, thereby overcoming the current limitations on access to local food.

The agrarian variant of eco-dietetics offers particularly powerful resistance to neoliberalism. By prioritizing food that is pleasurable rather than profitable, and grown sustainably rather than purchased by the eater, agrarian eco-dietetics seeks to overcome and replace the dominance of industrial agriculture. The corporate strain of eco-dietetics, by contrast, deploys an ecological vocabulary primarily for the purpose of increasing sales. Considered as a whole, then, eco-dietetics does not necessarily challenge any economic order, but its potential to do so lies with the victory of the agrarian over the corporate-industrial camp. And even if Whole Foods and other corporate uses of eco-dietetics present no explicit challenge to neoliberalism, they do challenge the powerful alliance between nutritionism and neoliberalism that seeks to measure both food and human bodies—if not the world itself—in abstract, quantitative terms.

## The Structure of Dietetic Discourses

I have argued that each dietetic discourse can be distinguished along four axes: its image of the human body, its vision of healthy food, the account it presents of the moral implications of eating, and its claim about the source of alimentary knowledge. Together these four axes constitute as an object of knowledge an entity incorporated during digestion that is abstract but nonetheless assimilated by the stomach. Humors, nutrients, and values are equally abstract entities. None can ever actually be physically or empirically encountered, though countless material practices presuppose their existence. All three of these abstractions “are things that do not exist and yet which are inscribed in reality and fall under a regime of truth dividing the true and the false” (Foucault 2010, 20).

The following table shows how the three discourses align along the four axes discussed above:

	<b><u>Humoral Dietetics</u></b> <b>[5th c. BCE—19th c. CE]</b>	<b><u>Nutritionism</u></b> <b>[19th c.—Present]</b>	<b><u>Eco-Dietetics</u></b> <b>[20th c.—Present]</b>
<b>Nature of the Body</b>	Mixture of humors and qualities	Group of nutrients	Collection of values in an ecosystem
<b>Character of Health and Healthy Food</b>	Balance and agreement of humors	Precisely quantified amounts of specified nutrients	As fresh and local as possible
<b>Moral Valence of Diet</b>	Displays moderation, temperance, and virtue	Ensures the health of the population	Protects the planet and environment
<b>Source of Alimentary Knowledge</b>	Personal experience	Scientific experts	Farmers and chefs

Eco-dietetic discourse did not emerge into the world, like Athena, already fully-formed. Indeed, the food movements that constitute eco-dietetics began as critics of industrial agriculture. Though eco-dietetics is clearly distinct from nutritionism, at times it seems to involve a revival of humoral and Galenic themes. Eco-dietetics appears neo-Galenic primarily because it developed as a critique of nutritionism that had itself emerged to critique Galenic medicine. While some eco-dietetic authors like Berry look to pre-modern traditions for inspiration, the discourse itself decisively breaks with humoral dietetics by adopting the moral language of environmentalism, by emphasizing the links between production and consumption, and by valorizing pleasure. The Galenic and eco-dietetic regimes share a discursive structure, but are nonetheless distinct. In an attempt to resist the hegemony of nutritionism and industrial production, what started with a suspicion that a style of eating had ecological ramifications turned into a fully developed method of evaluating food and diet, eventually constituting a dietetic discourse. Gyorgy Scrinis, by contrast, describes the same food movements as part of a “food quality paradigm.” This paradigm, which Scrinis equates with an ideology, prioritizes production quality, cultural tradition, and the consumer’s physical encounters with food (2013, 236). The present claim that eco-dietetics constitutes a new discourse, however, emphasizes the novelty of its account of the body, of the moral implications of diet, and of the proper object of alimentary knowledge, all of which Scrinis’ analysis fails to acknowledge.

The four axes proposed here to distinguish dietetic discourse should not be understood as trans-historical elements present in every dietary discourse. Numerous popular alimentary discourses in global history do not conform to the four-fold model. And while eco-dietetic thought is ascendant, Galenic and nutritionist discourses still have

force today, albeit in varying degrees. Although no one talks of humors, popular medical maxims still rehearse the traditional Galenic formulas emphasizing moderate diet and exercise; nutrients, of course, are written onto the packages of most foods; and a great deal of cooking advice now emphasizes fresh and local ingredients. Various discursive formations thus not only co-exist but also occasionally intermingle. Alice Waters' cookbooks, for example, often reference the nutritional components of the food. Discourses are therefore not "hermetically sealed, monolithic truth regimes" (Taylor 1984, 279). Though they are epistemologically distinct, it is certainly possible for one social formation to contain—and one individual to be capable of understanding—multiple discourses.

I have explained how eco-dietetics as a discourse disrupts the symbiotic relationship between nutritionism and neoliberalism. But I have also presented a history of dietetic discourses that promotes a less restricted concept of politics than contemporary criticism often takes for granted, one that sees more than merely the actions of the state as legitimately political. In this history, politics can be seen to include the routine, embodied activities that maintain or transform social formations. Common and therefore consequential, eating practices are political insofar as they materially reconfigure both individual bodies and social formations. The history of food politics comprises various dietetic discourses emerging, flourishing, and competing with one another. As this chapter has shown, the politics of food and diet are not primarily governmental, although governments play a role in determining the agricultural system of any place. Nutritionism almost wholly replaced humoral dietetics, but its own fate is now uncertain. These contests are not just about the meanings of food but also competing conceptualizations of

the body, health, morality, and authoritative knowledge. Politics occurs, then, with every bite.

## **Conclusion. Readers of Liebig**

A single, unexpected figure has appeared in most of the preceding chapters: the nineteenth-century German chemist Justus von Liebig (1803-1873). Liebig surfaces explicitly in the discussions of Marx, Whitman, and dietetics, but as I will show shortly, he also played a minor yet still significant role in the constitution of “the economy” as an object of numerical analysis. Although his name might not be familiar to many twenty-first century readers, in the nineteenth century he was one of the world’s most famous scientists and public figures, and is generally acknowledged as the founder of organic chemistry (Brock 2002; Finlay 1992, 405; Munday 1998, 409). While Liebig’s works do not themselves speak in the language or structure of political theory—they largely take the form of popular introductions to contemporaneous science—his ideas and theses stand at the center of several debates that do. For my purposes, Liebig’s ideas inspired four of the transformations that I have tracked in the previous chapters. In lieu of a summarizing them, then, I will pull out Liebig’s thread from the argumentative fabric of each. I will end the discussion by connecting some of Liebig’s arguments back to the claims I made about social formations in the introduction.

Liebig aided in the construction of the economy primarily through his influence on agricultural practices. As I argued in the first chapter, the emergence of railroads and their corporations established two essential conditions of possibility for the appearance of “the economy” as a measurable and representable object. The railroads, in short, established the abstract space and time in which a national economy exists by linking national markets and creating national time zones. But the rapid rise of the railroads depended on, among other things, the massive boom in Western agriculture in the United

States. Farmers migrating West fueled the demand for more railways and stations, while both production materials coming to the farms and commodities going back provided much of the cargo for the trains (Cronon 1991). During the first period of the rail development, the 1830s and 1840s, American farmers also began to use numerical accounting techniques *en masse* (Pawley 2010). Emily Pawley notes that “by the late 1830s, agricultural journals overflowed with reader accounts of exceptional crops or particularly successful techniques, descriptions of their bookkeeping methods, and examples of specialized ledgers, daybooks, and labor books” (2010, 465) and that “by the early 1840s, accounts with fields and animals had become a standard form of presenting agricultural information, and a standard component of agricultural argument” (2010, 468). Liebig was an important catalyst in this development. As Pawley details,

In *Familiar Letters on Chemistry*, he instructed chemists to analyze the ash of every kind of plant as grown on all soils, to learn which elements each plant consumed in what quantities.... Through chemistry, Liebig argued, farmers could achieve levels of quantitative control over their farms previously reserved for developing forms of industrial production. (Pawley 2010, 474)

Like double-entry bookkeeping, these accounting techniques transformed the means by which farmers could observe the “growth” of their farm’s yield or profit. In short, Liebig’s work propelled some of the early efforts to measure, classify, and represent economic activities numerically.

Back in Britain, John Stuart Mill read Liebig’s chemical investigations enthusiastically and held them up as models in his texts on logical method, while Liebig in turn promoted the translation of Mill’s *Logic* into German (Munday 1998). Furthermore, Jevons—the economist traditionally credited with the introduction of marginalism and advanced mathematics into economics—was inspired to develop his understandings of margins and marginal calculations after reading Liebig’s mineral



theory of plant growth. As Michael White notes, “if Liebig lacked the theoretical sophistication of Helmholtz, his rendition of those arguments in *Chemical Letters* enabled Jevons to crystallize the significance of the marginalist project” (2004, 256). More specifically, Jevons was drawn to Liebig’s law of the minimum (which Liebig popularized rather than discovered). The law holds that a plant’s growth is limited by the nutrient in shortest supply rather than the total amount of nutrients. As an example, assume a plant requires nutrients A, B, and C to grow. Once the soil runs out of A, adding more of B and C will not result in more growth. In the language of the marginal economics Jevons was beginning to articulate, there is no “marginal” value to adding nutrients B and C in the absence of nutrient A.

Marx, too, read Liebig and cited him in order to give scientific backing and authority to his pronouncements about the damaging effects of capitalist systems of production on the earth and its workers. Liebig’s theories of agricultural chemistry explained for Marx how capitalist agriculture was depleting the European soils, and his theories of animal nutrition—along with the energeticist discovery of the equivalence of matter and force—provided Marx with his concept of labor-power. Marx’s so-called labor theory of value, as I argued previously, was therefore not the refinement of Ricardo’s account, as the conventional readings hold, but was developed in response to the scientific literature of energeticist physics, agricultural chemistry, and animal nutrition. When Marx summarizes his conclusions about the effects of capitalism, claiming that it “only develops the techniques and the degree of combination of the social process of production by simultaneously undermining the original sources of all wealth—the soil and the worker” (1981, 638), the emphasis on soil and workers locates Marx

firmly within Liebig's ambit. In the footnotes Marx praises Liebig's "immortal merits" and "flashes of insight" (1981, 638). His insights, then, included articulating not only the chemical mechanisms through which industrial agriculture drained the soil of its nutrients without returning them but also how the conditions of overwork in capitalist factories were slowly killing laborers by forcing them to expend more energy than their diets produced.

Whitman, in turn, was captivated by Liebig's account of organic life cycles. Liebig's depiction of the cosmos provided scientific inspiration for the poet's denial of death and his celebration of all matter, organic or not. The poem "This Compost" demonstrates the point very clearly (Arvin 1938, 159). In it the poet questions how the earth, which continually receives sick or decaying bodies into it, nevertheless produces and sustains new life:

O how can it be that the ground itself does not sicken?  
How can you be alive you growths of spring?  
How can you furnish health you blood of herbs, roots, orchards, grain?  
Are they not continually putting distemper'd corpses within you?  
Is not every continent work'd over and over with the sour dead? (495)

Here the poet expresses mystification at the Earth's immunity to disease and ability to cure or sanitize dead or decaying bodies. The "growths of spring" represent new life that emerges not only out of dead soil but out of the cold, lifeless winter. The reference to the "blood" of plants might strike contemporary, nutritionist readers as odd, but Whitman's image of an absorbing cosmos draws from the Galenic tradition's description of a world in which qualities flowed constantly back and forth between entities. Whitman, then, straddles the line between humoralism and nutritionism. When the poet answers the question posed about the ability of the earth to defy disease and death, he exclaims in wonder, "Behold this compost! behold it well! ... What chemistry!" (496). The emphatic

embrace of chemistry in the poem echoes the language and punctuation of Whitman's review of Liebig's book, *Chemistry in its Application to Agriculture and Physiology*, written in the *Brooklyn Daily Eagle* decades earlier: "Chemistry! The elevating, beautiful study! ... Chemistry—that involves the essences of creation, and the changes, and the growths, and formations and decays, of so large a constituent part of the Earth" .

Although I know of no equivalent evidence that Whitman read *Familiar Letters* in addition to *Chemistry in its Application*, in the third edition of *Letters*, published in 1851, a plausible inspiration for the third line of "Song of Myself" ("Every atom belonging to me as good belongs to you") can be found:

Death, followed by the dissolution of the dead generation, is the source of life for a new one. The same atom of carbon, which as a constituent of a muscular fibre in the heart of a man assists to propel blood through his frame, was, perhaps, a constituent in the heart of one of his ancestors; and any atom of nitrogen in our brain has, perhaps, been a part of the brain of an Egyptian or of a negro. (Liebig 1851, 181)

What Whitman may have learned from Liebig's text enabled him to place all matter, whether organic or inorganic, on the same ontological plane. In section 20 of "Song of Myself," for example, the poet explicitly connects the questions of diet and death:

Who goes there? hankering, gross, mystical, nude;  
How is it I extract strength from the beef I eat?

What is a man anyhow? what am I? what are you? [...]

I know I am deathless, [...]

My foothold is tenon'd and mortis'd in granite,  
I laugh at what you call dissolution,  
And I know the amplitude of time. (206-207)

In order to answer his question about drawing sustenance from meat, the speaker is drawn immediately to a more fundamental question about the nature of the body. But the poet also knows that once his body dies, the material that composed it will become part

of another body in turn. The poet's body is anchored in the world in the same manner as granite. Within this universe, touching provides the connections between entities.

Rather than rehearse the argument about eating in which Liebig figures as a paradigmatic nutritionist, I will note that in the previous chapter I did not tell the whole story about Nietzsche's writings on diet, for Nietzsche, like Whitman, drew from both the humoral and nutritionist discourses. But unlike Whitman, Nietzsche was a regular consumer of Liebig's Extract of Meat, the industrial beef product that Liebig successfully sold as a nutritional supplement in the 1880s and 90s and which can still be purchased today (Chamberlain 1996). Liebig produced the Extract in a business venture with a railroad engineer who owned land and cattle in Uruguay and Brazil (Brock 2002, 225; Finlay 1992). The Extract was originally marketed as a nutritional supplement, but within twenty years those health claims had been so thoroughly debunked that Liebig's company was forced to adopt a new marketing strategy selling the product solely as a flavoring agent (Finlay 1992). Nietzsche's attempt to sketch a philosophy of nutrition was possibly driven by his unsuccessful dietary experiments with Liebig's Extract of Meat. The Germans of the late nineteenth century, consuming large quantities of Liebig's Extract of Meat, might have been suffering from a case of national indigestion after all, as Nietzsche suspected (Nietzsche 2010, 238).

I will conclude by turning to Liebig's venture into the massive literature exploring and deploying the metaphor of the state as a body politic. In a way illustrative of my dissertation's central argument, Liebig provides an account of both organic bodies and the state as objects which require constantly renewed routine maintenance in order to endure:

In every hour a portion of our body dies off, and even in the state of perfect health, the machine, after seventy or eighty years, becomes the prey of the inorganic powers; all resistance ceases; the elements of the machine return to the atmosphere and to the soil.... As in the body of an individual, so also in the sum of all individuals, which constitutes the state, there goes on a change of matter, which is a consumption of all the conditions of individual and social life.... The change of matter, in the state, as in the body, is the source of all its powers; its continued existence depends on the restoration of the wasted materials, on the renovation or restoration of all the conditions of individual or social life. (Liebig 1859, 479–481)

With some qualifications, the quotation captures many of the important characteristics of social formations that I outlined in the introduction. Most importantly, where Liebig has the state as the sum of individuals, I would put instead social formations composed not just of the sum of human individuals but of multiple agents and processes both human and non-human. Social formations share with organic bodies a fundamental susceptibility to time's "perpetual perishing," to evoke Whitehead's term (2010). They therefore endure by renewing their constitutive processes. Returning to Elias' metaphor of dancing, the moves that make up the routine must recur in order for the dance as a whole to continue. Social formations endure because of processes of routine maintenance—because of politics.

## Bibliography

- Adorno, Theodor W. 1973. *Negative dialectics*. New York: Continuum.
- Adorno, Theodor W. 1976. "On the Logic of the Social Sciences." In *The Positivist Dispute in German Sociology*, eds. Theodor W. Adorno et al. London: Heinemann, 105–22.
- Agnew, Jean-Christophe. 1988. *Worlds Apart the Market and the Theater in Anglo-American Thought, 1550 - 1750*. 1. paperback ed. Cambridge: Cambridge University Press.
- Aguiar, Marian. 2011. *Tracking Modernity: India's Railway and the Culture of Mobility*. University Of Minnesota Press.
- Allen, Patricia, and Julie Guthman. 2006. "From 'Old School' to 'Farm-to-School': Neoliberalization from the Ground up." *Agriculture and Human Values* 23(4): 401–15.
- Allen, Patricia, and Martin Kovach. 2000. "The Capitalist Composition of Organic: The Potential of Markets in Fulfilling the Promise of Organic Agriculture." *Agriculture and Human Values* 17(3): 221–32.
- Althusser, Louis. 2006. *For Marx (Radical Thinkers)*. Verso.
- Anderson, Benedict R. O'G. 1991. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Rev. and extended ed. London ; New York: Verso.
- Appleby, Joyce Oldham. 1978. *Economic Thought and Ideology in Seventeenth-Century England*. Princeton: Princeton University Press.
- Arendt, Hannah. 1998. *The Human Condition*. Chicago: University of Chicago Press.
- . 2006. *On Revolution*. New York: Penguin Books.
- Aristotle. 1988. *The Politics*. Cambridge [England] ; New York: Cambridge University Press.
- . 2001. "Nicomachean Ethics." In *The Basic Works of Aristotle*, The Modern Library classics, New York: Modern Library, 935–1126.
- Arvin, Newton. 1938. *Whitman*. New York: Macmillan.
- Ashworth, William. 2003. *Customs and Excise: Trade, Production and Consumption in England 1640-1845*. Oxford: Oxford University Press.
- Backhaus, Hans-Georg. 1980. "On the Dialectics of the Value-Form." *Thesis Eleven* 1(1): 99–120.

- Bacon, Francis. 1858. 5 *The Works of Francis Bacon*. eds. James Spedding, Robert Leslie Ellis, and Douglas Denon Heath. London: Longman and co.
- . 1903. “Selections from Lord Bacon’s ‘History of Life and Death,’ Etc.” In *The Art of Living Long*, Milwaukee: William F. Butler, 117–40.
- Baksi, Pradip. 1996. “Karl Marx’s Study of Science and Technology.” *Nature, Society, and Thought* 9(3): 261–96.
- Bauer, Otto. 2000. *The Question of Nationalities and Social Democracy*. Minneapolis: University of Minnesota Press.
- Beard, Charles A. 1986. *An Economic Interpretation of the Constitution of The United States*. Free Press.
- Belasco, Warren James. 1989. *Appetite for Change: How the Counterculture Took on the Food Industry, 1966-1988*. 1st ed. New York: Pantheon Books.
- Bennett, Jane. 2001. *The Enchantment of Modern Life: Attachments, Crossings, and Ethics*. Princeton: Princeton University Press.
- . 2010. *Vibrant Matter: A Political Ecology of Things (a John Hope Franklin Center Book)*. Durham, NC: Duke University Press Books.
- . 2011. “The Solar Judgment of Walt Whitman.” In *A Political Companion to Walt Whitman*, Political companions to great American authors, ed. John Evan Seery. Lexington, Ky: University Press of Kentucky, 131–46.
- . 2014. “Of Material Sympathies, Paracelsus, and Walt Whitman.” In *Material Ecocriticism*, eds. Serenella Iovino and Serpil Oppermann. Bloomington: Indiana University Press, 239–52.
- Bentley, Arthur F. 1995. *The Process of Government: A Study of Social Pressures*. 2nd edition. New Brunswick, N.J: Transaction Publishers.
- Berg, Maxine. 1980. *The Machinery Question and the Making of Political Economy, 1815-1848*. Cambridge [Eng.]; New York: Cambridge University Press.
- Berki, R. N. 1979. “On the Nature and Origins of Marx’s Concept of Labor.” *Political Theory* 7(1): 35–56.
- Berlant, Lauren, and Michael Warner. 1998. “Sex in Public.” *Critical Inquiry* 24(2): 547–66.
- Berry, Wendell. 1990. *What Are People for?: Essays*. San Francisco: North Point Press.
- Bersani, Leo. 1995. *Homos*. Cambridge, Mass: Harvard University Press.

- . 2010. *Is the Rectum a Grave?: And Other Essays*. Chicago ; London: The University of Chicago Press.
- Blasius, Mark. 1992. "An Ethos of Lesbian and Gay Existence." *Political Theory* 20(4): 642–71.
- Boehm-Bawerk, Eugen von. 2007. *Karl Marx and the Close of His System*. Mises Institute.
- Braddick, Michael J. 1996. *The Nerves of State: Taxation and the Financing of the English State, 1558-1714*. Manchester ; New York : New York: Manchester Univ Pr.
- Brewer, John. 1990. *The Sinews of Power: War, Money and the English State, 1688-1783*. Cambridge, Mass: Harvard University Press.
- Brock, W. H. 2002. *Justus von Liebig: The Chemical Gatekeeper*. Cambridge, U.K.; Cambridge University Press.
- Brown, Wendy. 2015. *Undoing the Demos: Neoliberalism's Stealth Revolution*. New York: Zone Books.
- Bryer, R.A. 2008. "Marx's Accounting Solution to the 'transformation Problem.'" [http://www2.warwick.ac.uk/fac/soc/wbs/subjects/accountinggroup/groupmembers/academics/rob\\_bryer/working\\_papers/marxs\\_accounting\\_solution\\_to\\_the\\_transformation\\_problem.pdf](http://www2.warwick.ac.uk/fac/soc/wbs/subjects/accountinggroup/groupmembers/academics/rob_bryer/working_papers/marxs_accounting_solution_to_the_transformation_problem.pdf).
- Brynjolfsson, Erik, and Andrew McAfee. 2014. *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. 1 edition. W. W. Norton & Company.
- Buck-Morss, Susan. 1995. "Envisioning Capital: Political Economy on Display." *Critical Inquiry* 21(2): 434–67.
- Buck, Peter. 1982. "People Who Counted: Political Arithmetic in the Eighteenth Century." *Isis* 73(1): 28–45.
- Burgin, Angus. 2012. *The Great Persuasion: Reinventing Free Markets since the Depression*. Cambridge, Mass: Harvard University Press.
- Burke, Edmund. 1999. "Reflections on the Revolution in France." In *The Portable Edmund Burke*, ed. Isaac Kramnick. Penguin Books, 416–73.
- Burton, Robert. 2001. *The Anatomy of Melancholy*. ed. Holbrook Jackson. New York: New York Review of Books.
- Butler, Judith. 2006. *Gender Trouble: Feminism and the Subversion of Identity*. 1 edition. New York: Routledge.



- Cady, Joseph. 1978. "Not Happy in the Capitol: Homosexuality and the 'Calamus' Poems." *American Studies* 19(2): 5–22.
- Caffentzis, George. 1997. "Why Machines Cannot Create Value; Or, Marx's Theory of Machines." In *Cutting Edge: Technology, Information Capitalism and Social Revolution*, Verso, 29–56.
- Canovan, Margaret. 1992. *Hannah Arendt: A Reinterpretation of Her Political Thought*. Cambridge ; New York: Cambridge University Press.
- Carver, Terrell. 1982. *Marx's Social Theory*. Oxford [Oxfordshire]; New York: Oxford University Press.
- . 1998. *The Postmodern Marx*. Manchester, UK: Manchester University Press.
- . 2011. "Democratic Manliness." In *A Political Companion to Walt Whitman*, ed. John Evan Seery. Lexington, Ky: University Press of Kentucky.
- Chamberlain, Lesley. 1996. "A Spoonful of Dr Liebig's Beef Extract." *The Times Literary Supplement* (4871): 14–15.
- Chambers, Samuel Allen. 2009. *The Queer Politics of Television*. London ; New York : New York: I. B. Tauris ; Distributed in the United States by Palgrave Macmillan.
- . 2013. *The Lessons of Rancière*. New York: Oxford University Press.
- . 2014. *Bearing Society in Mind: Theories and Politics of the Social Formation*. London: Rowman & Littlefield International.
- Champagne, John. 2008. "Walt Whitman, Our Great Gay Poet?" *Journal of Homosexuality* 55(4): 648–64.
- Chandler, Alfred. 1977. *The Visible Hand: The Managerial Revolution in American Business*. Cambridge, Mass: Belknap Press.
- Cohen, G. A. 2000. *Karl Marx's Theory of History*. Expanded ed. edition. Princeton, N.J.: Princeton University Press.
- Coleman, William. 1974. "Health and Hygiene in the Encyclopédie: A Medical Doctrine for the Bourgeoisie." *Journal of the History of Medicine and Allied Sciences* 29(4): 399–421.
- Connolly, William E. 2010. *A World of Becoming*. Durham, NC: Duke University Press.
- . 2013. *The Fragility of Things: Self-Organizing Processes, Neoliberal Fantasies, and Democratic Activism*. Durham: Duke University Press.
- Coole, Diana, and Samantha Frost, eds. 2010. *New Materialisms: Ontology, Agency, and Politics*. Durham NC ; London: Duke University Press Books.

- Coviello, Peter. 2001. "Intimate Nationality: Anonymity and Attachment in Whitman." *American literature* 73(1): 85.
- . 2013. "Whitman's Children." *PMLA* 128(1): 73–86.
- Cowan, Brian. 2004. "The Rise of the Coffeehouse Reconsidered." *The Historical Journal* 47(1): 21–46.
- Crain, Caleb. 2001. *American Sympathy: Men, Friendship, and Literature in the New Nation*. New Haven: Yale University Press.
- Crimp, Douglas. 2002. *Melancholia and Moralism: Essays on AIDS and Queer Politics*. Cambridge, Mass.: MIT Press.
- Cronon, William. 1991. *Nature's Metropolis: Chicago and the Great West*. 1st ed. New York: W. W. Norton.
- Davenant, Charles. 1771a. "An Essay on Ways and Means of Supplying the War." In *The Political and Commercial Works of That Celebrated Writer Charles D'Avenant: Relating to the Trade and Revenue of England, the Plantation Trade, the East-India Trade and African Trade*, ed. Charles Whitworth. London; T. Becket and P.A. de Hondt, and T. CAdell; and T. Evans: Printed for R. Horsfield, 1–83.
- . 1771b. "Of the Use of Political Arithmetic in All Considerations about the Revenues and Trade." In *The Political and Commercial Works of That Celebrated Writer Charles D'Avenant: Relating to the Trade and Revenue of England, the Plantation Trade, the East-India Trade and African Trade*, ed. Charles Whitworth. London; T. Becket and P.A. de Hondt, and T. CAdell; and T. Evans: Printed for R. Horsfield ;, 127–49.
- Deleuze, Gilles. 1994. *Difference and Repetition*. New York: Columbia University Press.
- Deleuze, Gilles, and Felix Guattari. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia*. 1 edition. Minneapolis: University of Minnesota Press.
- D'Emilio, John. 1983. *Sexual Politics, Sexual Communities: The Making of a Homosexual Minority in the United States, 1940-1970*. Chicago: University of Chicago Press.
- Dickson, P.G.M. 1967. *The Financial Revolution in England: A Study of the Development of Public Credit, 1688-1756*. London: Macmillan.
- Dobb, Maurice. 1975. *Theories of Value and Distribution since Adam Smith: Ideology and Economic Theory*. Cambridge [Eng.]: Cambridge University Press.
- Dumm, Thomas. 1999. *A Politics of the Ordinary*. New York: NYU Press.

- Dumont, Louis. 1977. *From Mandeville to Marx: The Genesis and Triumph of Economic Ideology*. Chicago: University of Chicago Press.
- Edelman, Lee. 2004. *No Future: Queer Theory and the Death Drive*. Durham: Duke University Press.
- Ekelund, Robert B., and Edward O. Price. 1979. "Sir Edwin Chadwick on Competition and the Social Control of Industry: Railroads." *History of Political Economy* 11(2): 213–39.
- Elias, Norbert. 1994. *The Civilizing Process*. Oxford: Blackwell.
- Emerson, Ralph Waldo. 1987. "Friendship." In *The Essays of Ralph Waldo Emerson*, Cambridge, Mass: Belknap Press, 111–28.
- Engels, Friedrich. 1978. "Speech at the Graveside of Marx." In *The Marx-Engels Reader*, ed. Robert C. Tucker. New York: Norton.
- Erkkila, Betsy. 1989. *Whitman the Political Poet*. New York: Oxford University Press.
- . 1994. "Whitman and the Homosexual Republic." In *Walt Whitman the Centennial Essays*, ed. Ed Folsom. Iowa City: University of Iowa Press, 153–71.
- . 2002. "Public Love: Whitman and Political Theory." In *Whitman East and West: New Contexts for Reading Walt Whitman*, ed. Ed Folsom. Iowa City: University of Iowa Press, 115–44.
- . 2011. "Songs of Intimacy and Love: An Afterward." In *Walt Whitman's Songs of Male Intimacy and Love: "Live Oak, with Moss" and "Calamus,"* The Iowa Whitman series, Iowa City: University of Iowa Press, 99–151.
- Ferguson, Kennan. 2014. "What Was Politics to the Denisovan?" *Political Theory* 42(2): 167–87.
- Finlay, Mark R. 1992. "Quackery and Cookery: Justus von Liebig's Extract of Meat and the Theory of Nutrition in the Victorian Age." *Bulletin of the History of Medicine* 66(3): 404–20.
- Firth, Ann. 1998. "From Oeconomy to 'the Economy': Population and Self-Interest in Discourses on Government." *History of the Human Sciences* 11(3): 19–35.
- Foster, J. B., and P. Burkett. 2008. "Classical Marxism and the Second Law of Thermodynamics: Marx/Engels, the Heat Death of the Universe Hypothesis, and the Origins of Ecological Economics." *Organization & Environment* 21(1): 3–37.
- Foucault, Michel. 1972. *The Archaeology of Knowledge ; And, the Discourse on Language*. New York: Pantheon Books.

- . 1990a. *The History of Sexuality: An Introduction*. New York: Vintage Books.
- . 1990b. *The History of Sexuality. Vol. 2: The Uses of Pleasure*. New York: Vintage Books.
- . 2009. *Security, Territory, Population: Lectures at the Collège de France 1977-1978*. New York: Picador.
- . 2010. *The Birth of Biopolitics: Lectures at the Collège de France, 1978-1979*. New York: Picador.
- Frank, Jason. 2011. "Promiscuous Citizenship." In *A Political Companion to Walt Whitman*, ed. John Evan Seery. Lexington, Ky: University Press of Kentucky, 155–84.
- Fraser, Nancy. 1990. "Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy." *Social Text* (25/26): 56–80.
- Freeman, Michael J. 1999. *Railways and the Victorian Imagination*. New Haven, Conn: Yale University Press.
- Galen. 1968. *Galen on the Usefulness of the Parts of the Body: Peri Chreias Moriōn [romanized Form] De Usu Partium*. Ithaca, N.Y: Cornell University Press.
- . 2000. "On the Humours." In *Galen: On Food and Diet*, ed. Mark Grant. London: Routledge, 14–18.
- Gellner, Ernest. 2009. *Nations and Nationalism, Second Edition*. 2 edition. Ithaca, N.Y.: Cornell University Press.
- Gregory, Frederick. 1977. *Scientific Materialism in Nineteenth Century Germany*. 1977 edition. Dordrecht, Holland; Boston: Springer.
- Grossman, Jay. 1990. "'The Evangel-Poem of Comrades and of Love': Revising Whitman's Republicanism." *ATQ* 4(3): 201.
- Guthman, Julie. 2003. "Fast Food/organic Food: Reflexive Tastes and the Making of 'Yuppie Chow.'" *Social & Cultural Geography* 4(1): 45–58.
- . 2004. *Agrarian Dreams: The Paradox of Organic Farming in California*. Berkeley: University of California Press.
- . 2008a. "'If They Only Knew': Color Blindness and Universalism in California Alternative Food Institutions." *The Professional Geographer* 60(3): 387–97.
- . 2008b. "Neoliberalism and the Making of Food Politics in California." *Geoforum* 39(3): 1171–83.

- . 2012. *Weighing In: Obesity, Food Justice, and the Limits of Capitalism*. Berkeley: University of California Press.
- Habermas, Jürgen. 1975. *Legitimation Crisis*. Boston: Beacon Press.
- . 1985a. *The Theory of Communicative Action, Volume 1: Reason and the Rationalization of Society*. Beacon Press.
- . 1985b. *The Theory of Communicative Action, Volume 2: Lifeworld and System: A Critique of Functionalist Reason*. Boston: Beacon Press.
- Halberstam, Judith. 2008. "The Anti-Social Turn in Queer Studies." *Graduate Journal of Social Science* 5(2): 140–56.
- Hallet, Danielle. 2011. "In the Belly of the (Blond) Beast: Nietzsche's Dietetic Critique of Philosophy." Master's Thesis. University of British Columbia.
- Halperin, David M. 1990. *One Hundred Years of Homosexuality: And Other Essays on Greek Love*. New York: Routledge.
- . 2002. *How to Do the History of Homosexuality*. Chicago: University of Chicago Press.
- . 2012. *How to Be Gay*. Cambridge, Mass: Belknap Press of Harvard University Press.
- Hamlin, Christopher. 2009. *Public Health and Social Justice in the Age of Chadwick: Britain, 1800-1854*. 1 Reissue edition. Cambridge etc.: Cambridge University Press.
- Harcourt, Bernard E. 2011. *The Illusion of Free Markets: Punishment and the Myth of Natural Order*. Cambridge, Mass: Harvard University Press.
- Harvey, David. 2007. *The Limits to Capital*. Updated edition. London ; New York: Verso.
- . 2010. *A Companion to Marx's Capital*. Verso.
- Hegel, Georg Wilhelm Friedrich. 1988. *Introduction to the Philosophy of History: With Selections from the Philosophy of Right*. Indianapolis: Hackett Pub. Co.
- Herrero-Brasas, Juan A. 2010. *Walt Whitman's Mystical Ethics of Comradeship: Homosexuality and the Marginality of Friendship at the Crossroads of Modernity*. Albany: State University of New York Press.
- Hirschman, Albert O. 1977. *The Passions and the Interests: Political Arguments for Capitalism before Its Triumph*. Princeton, N.J: Princeton University Press.

- Hirschman, Daniel. 2016. "Inventing the Economy, Or: How We Learned to Stop Worrying and Love the GDP." Dissertation. University of Michigan.
- Hobbes, Thomas. 1994. *Leviathan: With Selected Variants from the Latin Edition of 1668*. ed. Edwin Curley. Hackett Pub Co.
- Hobsbawm, E. J. 1991. *Nations and Nationalism since 1780: Programme, Myth, Reality*. Cambridge: Cambridge University Press.
- Honig, Bonnie. 1993. *Political Theory and the Displacement of Politics*. Cornell University Press.
- Hont, Istvan. 1990. "Free Trade and the Economic Limits to National Politics: Neo-Machiavellian Political Economy Reconsidered." In *The Economic Limits to Modern Politics*, Murphy Institute studies in political economy, ed. John Dunn. Cambridge [England] ; New York: Cambridge University Press.
- Horváth, Robert A. 1990. "The Rise of Macroeconomic Calculations in Economic Statistics." In *The Probabilistic Revolution, Ideas in the sciences*, ed. Lorenz Krüger. Cambridge, Mass.: MIT Press, 147–70.
- Hunt, E. K. 1977. "Value Theory in the Writings of the Classical Economists, Thomas Hodgskin, and Karl Marx." *History of Political Economy* 9(3): 322–45.
- Jefferson, Thomas. 1787. "To William S. Smith Paris, Nov. 13, 1787." <http://www.let.rug.nl/usa/presidents/thomas-jefferson/letters-of-thomas-jefferson/jefl64.php>.
- . 1816. "To Samuel Kercheval Monticello, July 12, 1816." <http://www.let.rug.nl/usa/presidents/thomas-jefferson/letters-of-thomas-jefferson/jefl246.php>.
- . 2008. *Notes on the State of Virginia*. Yale Law School Lillian Goldman Law Library. [http://avalon.law.yale.edu/18th\\_century/jeffvir.asp](http://avalon.law.yale.edu/18th_century/jeffvir.asp).
- Jouanna, Jacques. 2012. *Greek Medicine from Hippocrates to Galen: Selected Papers*. Boston: Brill.
- Joyce, Patrick. 2003. *The Rule of Freedom: Liberalism and the Modern City*. London; New York: Verso.
- . 2013. *The State of Freedom: A Social History of the British State since 1800*. Cambridge: Cambridge University Press.
- Kalpagam, U. 2014. *Rule by Numbers: Governmentality in Colonial India*. Lanham: Lexington Books.

- Kant, Immanuel. 1979. *The Conflict of the Faculties* = *Der Streit Der Fakultäten*. New York: Abaris Books.
- Kateb, George. 2011. "Walt Whitman and the Culture of Democracy." In *A Political Companion to Walt Whitman*, Political companions to great American authors, ed. John Evan Seery. Lexington, Ky: University Press of Kentucky, 19–46.
- Keynes, John Maynard. 1964. *The General Theory of Employment, Interest, and Money*. 1st Harvest/HBJ ed. San Diego: Harcourt, Brace, Jovanovich.
- Killingsworth, M. Jimmie. 1989. *Whitman's Poetry of the Body: Sexuality, Politics, and the Text*. Chapel Hill: University of North Carolina Press.
- Klein, Lawrence E. 1996. "Coffeehouse Civility, 1660-1714: An Aspect of Post-Courtly Culture in England." *Huntington Library Quarterly* 59(1): 31–51.
- Kuznets, Simon. 1934. *National Income, 1929-1932*. New York: National Bureau of Economic Research.
- . 1941. *1 National Income and Its Composition*. New York: National Bureau of Economic Research.
- Latour, Bruno. 1993. *We Have Never Been Modern*. Cambridge, Mass: Harvard University Press.
- . 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford; New York: Oxford University Press.
- Lavin, Chad. 2013. *Eating Anxiety: The Perils of Food Politics*. Minneapolis: University of Minnesota Press.
- Lees, Lynn Hollen. 1998. *The Solidarities of Strangers: The English Poor Laws and the People, 1700-1948*. Cambridge ; New York: Cambridge University Press.
- Levinson, Sanford. 2008. *Our Undemocratic Constitution: Where the Constitution Goes Wrong*. 1 edition. Oxford: Oxford University Press.
- Liebig, Justus von. 1851. *Familiar Letters on Chemistry, in Its Relation to Physiology, Dietetics, Agriculture, Commerce, and Political Economy*. Third. ed. John Blyth. London: Taylor, Walton, & Maberly.
- . 1859. *Familiar Letters on Chemistry, in Its Relation to Physiology, Dietetics, Agriculture, Commerce, and Political Economy*. Fourth. ed. John Blyth. London: Walton and Maberly.
- Locke, John. 1695. *Some Thoughts Concerning Education*. 3rd ed. London: Printed for A. and J. Churchill, at the Black Swan in Paternoster-row.

- . 1988. *Two Treatises of Government*. Student edition. ed. Peter Laslett. Cambridge, UK: Cambridge University Press.
- Luhmann, Niklas. 1995. *Social Systems*. Stanford, Calif: Stanford University Press.
- . 2012. *Theory of Society, Volume I*. Stanford University Press.
- Lukács, György. 1971. *History and Class Consciousness: Studies in Marxist Dialectics*. Cambridge, Mass.: MIT Press.
- Lynch, Michael. 1985. "Here Is Adhesiveness: From Friendship to Homosexuality." *Victorian Studies* (Autumn): 67–96.
- Mackenzie, Donald. 2008. *An Engine, Not a Camera: How Financial Models Shape Markets*. 1st edition. Cambridge, Mass.: The MIT Press.
- Mandel, Ernest. 1981. "Introduction." In *Capital: A Critique of Political Economy*, v. 1: Penguin classics, London ; New York, N.Y: Penguin Books in association with New Left Review.
- Marchart, Oliver. 2008. *Post-Foundational Political Thought: Political Difference in Nancy, Lefort, Badiou and Laclau*. Transferred to digital print. Edinburgh: Edinburgh Univ. Press.
- Martel, James R. 2009. "States of Indifference: Rousseau, Whitman, Bersani, and the Publicization of Love." *QLR* 28: 625.
- Martin, Robert K. 1975. "Whitman's Song of Myself: Homosexual Dream and Vision." *Partisan Review* 42(1): 80–96.
- Marx, Karl. 1962. 23 *Das Kapital. Band I*. Berlin: Dietz Verlag.
- . 1981. *Capital: A Critique of Political Economy*. London: Penguin Books in association with New Left Review.
- . 1996. *Marx: Later Political Writings*. Cambridge ; New York: Cambridge University Press.
- Marx, Karl, and Friedrich Engels. 1978. *The Marx-Engels Reader*. 2d ed. ed. Robert C. Tucker. New York: Norton.
- McCormick, Ted. 2009. *William Petty and the Ambitions of Political Arithmetic*. Oxford ; New York: Oxford University Press.
- McLellan, David. 2006. *Karl Marx: A Biography; Fourth Edition*. 4th edition. houndmills, Basingstoke, Hampshire England ; New York: Palgrave Macmillan.
- Melville, Herman. 2001. *Moby-Dick, Or, The Whale*. 150th anniversary ed. New York, N.Y: Penguin Books.



- Mill, John Stuart. 1874. *Essays on Some Unsettled Questions of Political Economy*. 2nd ed. London: Longmans, Green, Reader, and Dyer.
- . 1909. *Principles of Political Economy with Some of Their Applications to Social Philosophy*. 7th ed. London: Longmans, Green and Co.  
<http://www.econlib.org/library/Mill/mlPCover.html>.
- Mintz, Sidney Wilfred. 1986. *Sweetness and Power: The Place of Sugar in Modern History*. New York: Penguin Books.
- Mirowski, Philip. 1991. *More Heat than Light*. 1 edition. Cambridge, UK: Cambridge University Press.
- Mitchell, Timothy. 1998. "Fixing the Economy." *Cultural Studies* 12(1): 82–101.
- . 2002. *Rule of Experts Egypt, Techno-Politics, Modernity*. Berkeley: University of California Press.
- Moon, Michael. 1991. *Disseminating Whitman: Revision and Corporeality in Leaves of Grass*. Cambridge, Mass.: Harvard University Press.
- Munday, Pat. 1998. "Politics by Other Means: Justus von Liebig and the German Translation of John Stuart Mill's 'Logic.'" *The British Journal for the History of Science* 31(4): 403–18.
- Murray, Patrick. 2000. "Marx's Truly Social Labour Theory of Value: Part I, Abstract Labour in Marxian Value Theory." *Historical Materialism* 6(1): 27–66.
- Myrdal, Gunnar. 1990. *The Political Element in the Development of Economic Theory*. Transaction.
- Neisser, Hans. 1934. "General Overproduction: A Study of Say's Law of Markets." *Journal of Political Economy* 42(4): 433–65.
- Nestle, Marion. 2007. *Food Politics: How the Food Industry Influences Nutrition and Health*. Rev. and expanded ed. Berkeley: University of California Press.
- New York Times. 2014. "The Worst Voter Turnout in 72 Years." *The New York Times*.  
<http://www.nytimes.com/2014/11/12/opinion/the-worst-voter-turnout-in-72-years.html> (July 2, 2015).
- Nietzsche, Friedrich. 1954. *The Portable Nietzsche*. New York: Viking Press.
- . 1967. *The Will to Power*. New York: Random House.
- . 2010. *On the Genealogy of Morals and Ecce Homo*. ed. Walter Kaufmann. Vintage.

- Noble, M. 2009. "Whitman's Atom and the Crisis of Materiality in the Early Leaves of Grass." *American Literature* 81(2): 253–79.
- Ogborn, Miles. 1998. "The Capacities of the State: Charles Davenant and the Management of the Excise, 1683–1698." *Journal of Historical Geography* 24(3): 289–312.
- . 2007. *Indian Ink: Script and Print in the Making of the English East India Company*. Chicago: University of Chicago Press.
- Paarlberg, Robert. 2013. *Food Politics: What Everyone Needs to Know*®. 2nd ed. London: Oxford University Press.
- Parsons, Talcott. 1971. *The System of Modern Societies*. Englewood Cliffs, New Jersey: Prentice-Hall.
- . 1991. *The Social System*. 2nd edition. London: Routledge.
- Patinkin, Don. 1976. "Keynes and Econometrics: On the Interaction between the Macroeconomic Revolutions of the Interwar Period." *Econometrica* 44(6): 1091–1123.
- Pawley, Emily. 2010. "Accounting with the Fields: Chemistry and Value in Nutrient in American Agricultural Improvement, 1835–1860." *Science as Culture* 19(4): 461–82.
- Paxson, Heather. 2008. "Post-Pasteurian Cultures: The Microbiopolitics of Raw-Milk Cheese in the United States." *Cultural Anthropology* 23(1): 15–47.
- Perlman, Mark. 1987. "Political Purpose and National Accounts." In *The Politics of Numbers, The Population of the United States in the 1980s*, eds. William Alonso and Paul Starr. New York: Russell Sage Foundation, 133–252.
- Petricusko, Nikolaus. 1932. "A Theory of Prices." *Journal of Political Economy* 40(6): 808–13.
- Philipsen, Dirk. 2015. *The Little Big Number: How GDP Came to Rule the World and What to Do about It*. Princeton: Princeton University Press.
- Pincus, Steve. 1995. "'Coffee Politicians Does Create': Coffeehouses and Restoration Political Culture." *The Journal of Modern History* 67(4): 807–34.
- Pocock, J. G. A. 1975. *The Machiavellian Moment: Florentine Political Thought and the Atlantic Republican Tradition*. Princeton, N.J.: Princeton University Press.
- . 1990. "The Political Limits to Premodern Economics." In *The Economic Limits to Modern Politics*, Murphy Institute studies in political economy, ed. John Dunn. Cambridge [England] ; New York: Cambridge University Press.

- Polanyi, Karl. 2001. *The Great Transformation: The Political and Economic Origins of Our Time*. 2nd Beacon Paperback ed. Boston, MA: Beacon Press.
- Pollan, Michael. 2008. "An Open Letter to the Next Farmer in Chief - Michael Pollan." *The New York Times*. <http://www.nytimes.com/2008/10/12/magazine/12policy-t.html> (January 6, 2016).
- Poovey, Mary. 1995. *Making a Social Body: British Cultural Formation, 1830-1864*. 1st ed. University Of Chicago Press.
- . 1998. *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society*. Chicago: University of Chicago Press.
- . 2001. "For Everything Else, There's..." *Social Research* 68(2): 397–426.
- Postone, Moishe. 1996. *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*. Cambridge University Press.
- Powell, O. W. 2003. "Introduction." In *On the Properties of Foodstuffs = De Alimentorum Facultatibus*, Cambridge, UK: Cambridge University Press.
- Putnam, Robert. 2001. *Bowling Alone: The Collapse and Revival of American Community*. 1st edition. New York: Touchstone Books by Simon & Schuster.
- Rabinbach, Anson. 1992. *The Human Motor : Energy, Fatigue, and the Origins of Modernity*. Berkeley: University of California Press.
- Rancière, Jacques. 2001. "Ten Theses on Politics." *Theory & Event* 5(3). [https://muse.jhu.edu/journals/theory\\_and\\_event/v005/5.3ranciere.html](https://muse.jhu.edu/journals/theory_and_event/v005/5.3ranciere.html) (February 1, 2016).
- . 2004. *Disagreement: Politics And Philosophy*. 1 edition. University of Minnesota Press.
- . 2011. "The Thinking of Dissensus: Politics and Aesthetics." In *Reading Rancière*, eds. Paul Bowman and Richard Stamp. London ; New York: Continuum, 1–17.
- Reiss, Edmund. 1963. "Whitman's Debt to Animal Magnetism." *PMLA* 78(1): 80–88.
- Reynolds, David S. 1995. *Walt Whitman's America: A Cultural Biography*. 1st ed. New York: Knopf.
- Ricardo, David. 1821. *On the Principles of Political Economy and Taxation*. 3rd ed. London: John Murray. <http://www.econlib.org/library/Ricardo/ricP1.html>.
- Rifkin, Jeremy. 1996. *The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era*. New edition. New York: Tarcher.

- Rogin, Leo. 1933. "Werner Sombart and the 'Natural Science Method' in Economics." *Journal of Political Economy* 41(2): 222–36.
- Rose, Nikolas S. 1999. *Powers of Freedom Reframing Political Thought*. Cambridge, UK: Cambridge University Press.
- Roseveare, Henry. 1969. *The Treasury: The Evolution of a British Institution*. London: Allen Lane.
- Rousseau, Jean-Jacques. 1997. *Rousseau: "The Social Contract" and Other Later Political Writings (Cambridge Texts in the History of Political Thought)*. ed. Victor Gourevitch. Cambridge University Press.
- Samuelson, Paul. 1971. "Understanding the Marxian Notion of Exploitation: A Summary of the so-Called Transformation Problem between Marxian Values and Competitive Prices." *Journal of Economic Literature* 9(2): 399–431.
- Say, Jean-Baptiste. 1803. *Traité D'économie Politique Ou Simple Exposition de La Manière Dont Se Forment, Se Distribuent et Se Consomment Les Richesses*. Paris: Deterville.
- Schabas, Margaret. 2005. *The Natural Origins of Economics*. Chicago: University of Chicago Press.
- Schley, Douglas. 2013. "Tracks in the Streets: Railroads, Infrastructure, and Urban Space in Baltimore, 1828-1840." *Journal of Urban History* 39(6): 1062–84.
- Schmitt, Carl, Tracy B. Strong, and Leo Strauss. 2007. *The Concept of the Political: Expanded Edition*. Enlarged edition. Chicago: University Of Chicago Press.
- Schumpeter, Joseph A. 1949. *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Cambridge, MA: Harvard University Press.
- . 1996. *History of Economic Analysis: With a New Introduction*. Revised edition. ed. Mark Perlman. Oxford University Press, USA.
- Scorza, Jason A. 2004. "Liberal Citizenship and Civic Friendship." *Political Theory* 32(1): 85–108.
- Scott, James C. 1998. *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press.
- Sedgwick, Eve Kosofsky. 1985. *Between Men: English Literature and Male Homosocial Desire*. New York: Columbia Univ. Press.
- . 1990. *Epistemology of the Closet*. Berkeley, Calif.; London: University of California Press.

- Shapin, Steven. 1998. "The Philosopher and the Chicken: On the Dietetics of Disembodied Knowledge." In *Science Incarnate: Historical Embodiments of Natural Knowledge*, eds. Christopher Lawrence and Steven Shapin. Chicago, Ill: The University of Chicago Press, 21–50.
- . 2003. "How to Eat Like a Gentleman: Dietetics and Ethics in Early Modern England." In *Right Living: An Anglo-American Tradition of Self-Help Medicine and Hygiene*, ed. Charles E. Rosenberg. Baltimore: Johns Hopkins University Press, 21–58.
- . 2014. "'You Are What You Eat': Historical Changes in Ideas about Food and Identity." *Historical Research* 87(237): 377–92.
- Shapin, Steven, and Simon Schaffer. 1985. *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life : Including a Translation of Thomas Hobbes, Dialogus Physicus de Natura Aeris by Simon Schaffer*. Princeton, N.J: Princeton University.
- Skidelsky, Robert. 2005. *John Maynard Keynes*: New York: Penguin Books.
- Skinner, Quentin. 1969. "Meaning and Understanding in the History of Ideas." *History and Theory* 8(1): 3–53.
- . 1996. *Reason and Rhetoric in the Philosophy of Hobbes*. Cambridge New York: Cambridge University Press.
- . 2000. *Machiavelli: A Very Short Introduction*. Oxford ; New York: Oxford University Press.
- Smith, Adam. 1904. *An Inquiry into the Nature and Causes of the Wealth of Nations*. 5th ed. London: Methuen & Co. <http://www.econlib.org/library/Smith/smWN.html>.
- Stalin, Joseph. 2013a. *Dialectical and Historical Materialism*. CreateSpace Independent Publishing Platform.
- . 2013b. *Marxism and the National Question*. CreateSpace Independent Publishing Platform.
- Stein, Marian. 1967. "'Comrade' or 'Camerado' in Leaves of Grass." *Walt Whitman Review* 13(4): 123–25.
- Strauss, Leo. 1978. *Thoughts on Machiavelli*. Chicago: University of Chicago Press.
- The Men's Answer to the Women's Petition against Coffee*. 1674. London.
- The Women's Petition Against Coffee*. 1674. London.
- Thompson, E. P. 1971. "The Moral Economy of the English Crowd in the Eighteenth Century." *Past & Present* (50): 76–136.

- Tocqueville, Alexis de. 2000. *Democracy in America*. 1st Perennial classics ed. ed. J. P. Mayer. New York: Perennial Classics.
- Topik, Steven. 2009. "Coffee as a Social Drug." *Cultural Critique* (71): 81–106.
- Tribe, Keith. 1978. *Land, Labour, and Economic Discourse*. London ; Boston: Routledge & K. Paul.
- . 1981. *Genealogies of Capitalism*. Atlantic Highlands, N.J: Humanities Press.
- . 2015. *The Economy of the Word: Language, History, and Economics*. OUP USA.
- Unger, Roberto Mangabeira. 1977. *Law in Modern Society*. Reissue edition. New York: Free Press.
- . 1986. *The Critical Legal Studies Movement*. Harvard University Press.
- . 2004a. *False Necessity : Anti-Necessitarian Social Theory in the Service of Radical Democracy*. London [u.a.]: Verso.
- . 2004b. *Social Theory: Its Situation and Its Task*. Pbk. Ed edition. London ; New York: Verso.
- . 2009. *The Self Awakened: Pragmatism Unbound*. Cambridge, MA: Harvard University Press.
- Unna, Yvonne. 2012. "A Draft of Kant's Reply to Hufeland: Key Questions of Kant's Dietetics and the Problem of Its Systematic Place in His Philosophy." *Kant-Studien* 103(3).
- Villa, Dana Richard. 1996. *Arendt and Heidegger: The Fate of the Political*. Princeton, N.J: Princeton University Press.
- Vincent, John. 2000. "Rhetorical Suspense, Sexuality, and Death in Whitman's Calamus Poems." *Arizona Quarterly: A Journal of American Literature, Culture, and Theory* 56(Spring): 29–48.
- Ward, A. 2011. "Friendship and Politics in Aristotle's Nicomachean Ethics." *European Journal of Political Theory* 10(4): 443–62.
- Warner, Michael, ed. 1993. "Introduction." In *Fear of a Queer Planet: Queer Politics and Social Theory*, Cultural politics, Minneapolis: University of Minnesota Press, vii – xxxi.
- . 1996. "Whitman Drunk." In *Breaking Bounds: Whitman and American Cultural Studies*, eds. Betsy Erkkila and Jay Grossman. New York: Oxford University Press, 30–43.

- . 2010. *Publics and Counterpublics*. 1. paperback ed., 3. print. New York, NY: Zone Books.
- Weber, Max. 1978. *Economy and Society: An Outline of Interpretive Sociology*. Fourth edition. eds. Guenther Roth and Claus Wittich. University of California Press.
- . 1981a. "Politics as a Vocation." In *From Max Weber: Essays in Sociology*, New York: Oxford Univ. Press, 77–128.
- . 1981b. "Religious Rejections of the World and Their Directions." In *From Max Weber: Essays in Sociology*, New York: Oxford Univ. Press, 323–59.
- . 1981c. "Science as a Vocation." In *From Max Weber: Essays in Sociology*, New York: Oxford Univ. Press, 129–56.
- . 2001. *The Protestant ethic and the spirit of capitalism*. London; New York: Routledge.
- Weeks, Kathi. 2011. *The Problem with Work: Feminism, Marxism, Antiwork Politics, and Postwork Imaginaries*. Durham: Duke University Press.
- Wendling, Amy E. 2009. *Karl Marx on Technology and Alienation*. Basingstoke [England]; New York: Palgrave Macmillan.
- Whitehead, Alfred North. 2010. *Process and Reality*. 2nd edition. Free Press.
- White, Michael V. 2004. "In the Lobby of the Energy Hotel: Jevons's Formulation of the Postclassical 'Economic Problem.'" *History of Political Economy* 36(2): 227–71.
- White, Richard. 2012. *Railroaded: The Transcontinentals and the Making of Modern America*. 1 edition. New York: W. W. Norton & Company.
- Whitman, Walt. 2011. *Walt Whitman's Songs of Male Intimacy and Love: "Live Oak, with Moss" and "Calamus."* ed. Betsy Erkkila. Iowa City: University of Iowa Press.
- Williams, Alex, and Nick Srnicek. 2013. "#ACCELERATE MANIFESTO for an Accelerationist Politics." *Critical Legal Thinking*.  
<http://criticallegalthinking.com/2013/05/14/accelerate-manifesto-for-an-accelerationist-politics/> (January 31, 2016).
- Williams, C. K. 2010. *On Whitman*. Princeton, N.J: Princeton University Press.
- Wolin, Sheldon S. 1994. "Fugitive Democracy." *Constellations* 1(1): 11–25.
- Wrangham, Richard W. 2009. *Catching Fire: How Cooking Made Us Human*. New York: Basic Books.

- Yingling, Thomas. 1996. "Homosexuality and Utopian Discourse in American Poetry." In *Breaking Bounds: Whitman and American Cultural Studies*, eds. Betsy Erkkila and Jay Grossman. New York: Oxford University Press, 135–46.
- Young, Katherine E. 2014. "Adorno, Gastronomic Authenticity, and the Politics of Eating Well." *New Political Science* 36(3): 387–405.
- Zimmerman, Andrew. 1997. "The Ideology of the Machine and the Spirit of the Factory: Remarx on Babbage and Ure." *Cultural Critique* (37): 5.



### *Curriculum Vitae*

Arthur Joseph Rebrovick III (Tripp) was born in Nashville, Tennessee on June 26, 1987. He graduated *magna cum laude* from Harvard College in 2009 with a BA in Social Studies. He received his Ph.D. in political science from Johns Hopkins University in 2016 under the supervision of Professors Samuel Allen Chambers and Jane Bennett. His scholarly interests include the history of political and social thought, the politics of food and diet, classical and contemporary political economy, American constitutional law, and gay, lesbian, and queer studies.